

IRRATIONALISM IN THE FIGHT AGAINST SEX-ECONOMY

I. BIOPHYSICAL FUNCTIONALISM AND MECHANISTIC NATURAL SCIENCE*

By WILHELM REICH, M.D.

Editor's note: The following article was written in November 1941, as if with a presentiment of what was going to happen shortly afterwards. Dr. Reich had not intended it for publication at this time. Now, however, after the incredible incident of Dr. Reich's arrest, this article may well serve as an introduction to a series of articles about similar irrational incidents which happened in Europe and about which nothing has as yet been published.

On December 12, 1941, at two o'clock in the morning, Dr. Reich was routed from bed by three agents of the FBI (Federal Bureau of Investigation), arrested, and taken to Ellis Island. He was given no reason for his arrest. He thought he was merely going to be questioned and would be released within a few hours. However, he was held at Ellis Island for over three weeks, not being released until January 5, 1942.

In reality, Dr. Reich's arrest had nothing to do with the simultaneous arrest of some 600 "enemy aliens." The FBI had investigated Dr. Reich's "case" for a considerable period of time prior to his arrest. We knew that. These investigations made it clear that there was not the slightest reason for suspicion against Dr. Reich as an "enemy alien," "subversive element" or whatnot. Neither Dr. Reich nor any of his co-workers or acquaintances would have dreamed of the possibility of his being arrested as an "enemy alien"; his pro-American feelings and his previous activities as a democratic anti-Fascist and anti-Stalinist were a matter of record and widely known. Evidently, his arrest was the result of a denunciation on the part of some overzealous opponents of Dr. Reich's scientific work who were too cowardly to come out against him in the open field of scientific discussion. This is nothing new. It had happened more than once in Europe that such individuals had run to the police, though an arrest had never occurred. It seems that the secret police, in understandable ignorance of Dr. Reich's work (although the writer had spent the better part of two hours in an attempt to explain its principles to the responsible FBI agent) were at a loss as to which of the groups, if any, that were considered inimical to the state they should put Dr. Reich in; yet, in spite of a complete lack of any evidence against him, they were unable to take the responsibility of leaving him at liberty.¹

* Translated from the manuscript by the Editor.

¹ The public seems to have been aware of the real state of affairs, to judge from the following story which circulated in New York: "They didn't know what to make of it, so they arrested Reich *together with his laboratory mice.*"

Of course, Dr. Reich would have been only too glad to answer any questions that any agent of the secret police might have asked him: on the subject of the "structural anchoring of a mechanistic civilization," on the "relationship of the discovery of the orgone energy to mysticism," on "the irrational content of the Fascist theory of race" or about "work democracy." However, he himself was never questioned previous to his arrest. At the hearing before a board, at which Dr. Reich was questioned by the District Attorney, it was perfectly clear that there was nothing to incriminate him; it was equally clear that nobody took seriously the question as to whether Dr. Reich was "a paid agent of Moscow." In other words, his arrest was clearly a matter of a mistake, of an irrational whispering campaign. It was impossible to find out who the informers were, since there is no legal way of getting at such people.

On October 20, 1941, when an FBI agent came to question me about Dr. Reich, he asked me not to tell Dr. Reich about this investigation. I told him that we had nothing to hide, so why should they? I told him, further, that it was to be expected that certain people would spread rumors about Dr. Reich, as had happened in Europe, and that—for this reason—we were only too glad to give the FBI *the facts*. Unfortunately, I was right in these expectations, but—even more unfortunately—I was wrong in believing that to give the FBI the facts would mean anything from a rational point of view. Thus it becomes necessary to dispel the veil of the "dangerous" and the "mystical" which from many sides has been spread around Dr. Reich and his work—if for no other reason than to reduce, if possible, the danger of having incidents of this kind recur. It is mainly for this reason that Dr. Reich has agreed to let me publish the following article at this time.—T. P. W.

The following presentation of the mechanistic concept of life is based on the author's experiences in Europe, a Europe which was to undergo Fascistic degeneration. Mechanistic concepts in biology usually go hand in hand with biological mysticism. Mysticism will fill in the gaps which a mechanistic concept of life of necessity leaves open. Biological mysticism is celebrating bloody triumphs in the Fascist theory of race. Every single threat to sex-economic biology has stemmed from the Fascist camp and from the Fascist ideologies of various circles. The comprehension of life on the basis of a functional natural science would be the most dangerous enemy of the Fascist emotional plague; for it sees the function of life as the *safeguarding* of living functioning instead of as pathological sadistic warfare. The battle between brutal biological mysticism and biological functionalism was raging in Europe long before the Hitlerian era. Most likely, this battle will also be

decided in Europe. America—except for the prevailing race prejudices—seems as yet hardly touched by this subterranean conflict concerning the comprehension and guidance of living functioning.

The investigation of biological energy encountered not only the obscurities of the life problem itself, it also ran, again and again, into the most peculiar reactions on the part of physicians, psychoanalysts, biologists, physicists and others, reactions which at first glance seemed to be nothing but an expression of the general negative attitude of the world toward new discoveries.

The archives of the Orgone Research Institute contain numerous documents concerning such reactions, the significance of which cannot be discussed in this context; they are open to examination by anyone who is interested. It will remain for future historians of science to shed light on the dangerous indecencies which I experienced. They range all the way

from breach of faith, defamation, and deprivation of financial support to political denunciation and attempts to have me deported on the part of so-called "authorities" and "guardians of the law." In spite of all this, two decades of hard work resulted in the discovery of the biological energy and in the confirmation of my findings.

It would be so much simpler to explain away the hostility toward our work by pointing out that "it has always been that way." Was not every important discovery disavowed, disregarded or fought by its contemporaries? Was not suffering always the lot of scientific pioneers? Were they not always decried as charlatans, frauds or psychopaths? To bow to what seems an inevitable fate would seem understandable indeed.

However, such reasoning is more than dubious. Why is it, one must ask, that the sciences, instead of participating in new discoveries and instead of *learning something new*, continue to endanger research work in new fields and often succeed in destroying it? Up to now, it has always been left to later generations to blame "narrow-mindedness," "jealousy" or "profit interests" for such occurrences. One might think that it would be possible to gain such insights *in time* instead of afterward; that it would be possible to take a *decent* attitude toward contemporary discoveries.

There is an element of derision in the fame which is heaped on courageous pioneers at a time when their exhausting struggle is long past, when they have ceased to suffer and the fruits of their struggles have become the easily acquired property of all. This recognition, late as it always is, is motivated much more by profit interests than by the desire to do better in the next case of pioneer work, that is, to help it along in its difficult stages rather than to endanger it. There is no consolation in the sadistic commiseration

which later generations bestow upon the broken pioneer. The very same characters who as contemporaries interfere with pioneer work are the ones who later—after others have won the fight—pick the easy fruits.

The malicious attitude of so-called "authorities" and "critics" during these years of hard struggle has revealed a similarity and a significance which are too important to go unmentioned.

Let us imagine that a stone, lying there on the ground, would suddenly begin to move, to expand and contract. The involuntary reaction to such a phenomenon would be horror and fright, similar to that at the unexpected sight of a poisonous snake. True, the object of any new discovery is in itself "alive," i.e., it functions; but to the eye of the average observer it is invisible, rigid, unalive. The discovery consists in the fact that one makes the invisible visible, the seemingly immobile mobile, the rigid functioning, the non-living living. Understandably enough, bion research had to experience this reaction of horror on the part of an unsuspecting world with particular force. For what it demonstrated was exactly the fact that high temperatures change inorganic material into "energy vesicles" or "bions" with a life-like motion; that, in other words, life can owe its existence to fire. That is, the actual facts are not at variance with the picture of the stone that begins to stir.

To the physician or teacher practising vegetotherapy it is a banal everyday fact that the human is the only living species who has smothered autonomic life in himself with cultural illusions and a mechanistic civilization and thus has removed it from consciousness and cut it off from natural activity. This is why the human of today, in spite of his innate longing for a knowledge of the living function, is characterized by a tremendous fear of the pulsations of life within himself. Clinical

observation shows us again and again the fear of the vegetative plasma current, in other words, the *fear of the involuntary* which dominates the human of today. The elimination of this fear is one of the main tasks of our medical and pedagogical work. The knowledge of this fear puts the motives which are commonly adduced for the malicious and indecent behavior toward new discoveries in a new light: they become immaterial and secondary. In reality, *the irrational reactions toward a new discovery are nothing but a manifestation of the enormous fear of the motility of that which is not perceptible to the senses or which seems immobile.*

The basic contradiction in the biologically rigid human—his longing for knowledge of living functioning and his simultaneous fear of it—explains the contradiction in his attitude. Humans expect the paradise for which they long to be brought about immediately and without effort. As nobody, of course, can do this for them, they react with disappointment or bitter hatred. We, the workers in sex-economy and orgone research, are met with deep anxiety and with a degree of defensiveness which gives food for thought to the psychiatrist. Our interest in the continuation and consolidation of our work demands that we try to understand these human reactions and try to find means of dealing with them. Of course, we cannot find consolation in the expectation that our work will "somehow and some day" find general recognition. Our work is neither of the other world, like that of the church, nor of some distant future, as people would like to see it; no, it has its roots in contemporary life, here, today, and in a practical way. We do not intend to wait until, fifty or a hundred years from now, the existence of the orgone may finally be conceded. It is up to us, and not to any so-called "authority," to see that the existence of the biological energy is recognized.

Our work suffers, further, from the fact that the humans who are alienated from natural sexuality believe they see in us an affirmation of their own lasciviousness and perversity. Thus, they meet us with a peculiar mixture of curiosity, bad conscience and a fear of being put beyond the pale of "good society" by contact with us. We did not, indeed, create the sexual chaos, the sexual smut and pornography; actually, we fight it vigorously; but we have to bear the consequences of the fact that the human being of today, sexually enslaved as he is, cannot distinguish genuine, natural love from secondary, perverse instinctual activity.

The fact that our biophysical research derives from the elucidation of the function of the orgasm constitutes a major difficulty. True, every single individual knows or has at least an inkling of the fact that "love" is a fundamental natural phenomenon in the realm of living functioning. But can we imagine that a member of the French Academy of Science would take an address on the disturbances of potency in man and woman as seriously as an address on electrons and protons? It is very unlikely that he who would succeed in mastering the sexual and psychic misery of the human beings of today could ever become a member of any of the existing Academies. No doubt, the electrons and protons are extremely important, but my contention is that what people expect of responsible scientific bodies is the solution of the problems of their disturbances of potency, of their marital and family difficulties, the problems of how to bring up their children, how to experience nature, etc. There is no doubt: the fear of living functioning also distorts thinking in the realm of scientific investigation. It is relevant to point out here that Freud, the founder of scientific psychology, did not receive the Nobel Prize, a distinction which is unhesitatingly bestowed upon every average discoverer in the fields of

physics or chemistry. Yet nobody will doubt for a moment that Freud's contribution to humanity is infinitely more important and deep-reaching than the electronic theory. The conclusion is inevitable that these highly esteemed electronic theories, in addition to their rational function, have another function: to divert people from those things which are closest to their hearts and—truly—to their genitals. Physics and chemistry regard themselves as "pure" sciences, having nothing to do with such "filthy" things as sexual emotions. As a result, we see metaphysics and pornography flourish side by side.

Imagine an animal breeder who, instead of cleaning his stables every day, would busy himself with spraying perfume toward the sun. He would rightly be called crazy. But that is exactly how our society behaves. During the Rococo period, people were not in the habit of bathing. The resulting body odor was covered up with perfume which at that time was a bit of inviolable custom. Nevertheless, there were then as yet no wars on the later mass scale. The custom of the compulsive participation of whole populations in the war disputes of sovereigns is a "product of civilization" which we owe to a—quite unjustifiably—glorified corporal named Napoleon. Since then, the cultivation of human brutality has—in spite of all the cultural talk—not decreased, but considerably increased. This brutality, together with the neuroses, psychotic tendencies, cancerous putrefaction of the tissues, constipation, perversions, murderous impulses, etc., is covered up by a ritualistic make-up in dress, cosmetics and behavior. This highly cultivated make-up however, cannot cover up the stench of the psychic pestilence. It reeks through the make-up and shows in spite of it.

The behavior of our society toward its body odor is no different from that of the people of the Rococo period. It glorifies flights into the stratosphere but does not

allow the Augean stable to be cleaned which poisons everyday human life. He who, instead of meditating about space and time, undertakes to clean this stable or even suggests ways of doing it, is called crazy.

It is an old story. It is older than the ancient Greeks whom we consider the bearers of a flourishing culture: Anaxagoras was accused of heresy and imprisoned, because he dared to deny that the earth enjoyed a privileged position among the planets. Socrates was condemned to death. Plato, in order to escape the same fate, spent many years in exile. Aristotle, his pupil, who was to determine thinking for two thousand years, was accused of heresy and condemned to death; he died in exile. Diagoras was condemned to death for denying the existence of the Gods. Protagoras was exiled from his country and his writings were publicly burned. Prodikos was executed for his contention that the Gods were the personification of natural forces.

It was no different two thousand years later. Giordano Bruno, who fought for scientific knowledge and against astrological superstition, was condemned to death by the Inquisition. It is the same psychic pestilence which delivered Galileo to the Inquisition, let Copernicus die in misery, made Leeuwenhoek a recluse, drove Nietzsche into insanity, Pasteur and Freud into exile. It is the indecent, vile attitude of contemporaries of all times. This has to be said clearly once and for all. One cannot give in to such manifestations of the pestilence.

But these "academic" attitudes—it would be more correct to call them panic reactions—have bitter consequences for their bearers. Since natural love and the autonomic life process are fundamentally identical, the exclusion of sexual problems from the scientific academies has completely blocked the approach to the central problems of natural science. Pathology

and medicine suffocate in mechanistic detail work on the *dead* organ and do not get at the living functioning of the organism—for this functioning smacks of sexuality. True, physics and mathematics have devised cosmic systems; but the orgone energy which we breathe, which flickers in the sky, which is at the basis of the sexual act, which explains the phenomena of biogenesis and which in all likelihood will dissolve many of the physicists' cosmic phantasies into nothing, this energy has been overlooked so completely that one must ask oneself how it was at all possible. Our academicians feel so loftily removed from the living function, their language has become so complicated, so much out of the world, so unrealistic, vain and basically untrue that they have completely lost all contact with the real life process. More than that, they function like a machine which has been designed for the special purpose of *preventing*, by all means, the investigation of the life process.

For this reason, scientific youth feels dissatisfied and insecure. Every simple, unsophisticated and decent mortal, as can easily be demonstrated, is quite well acquainted with the fact that cancer is the result of the ruinous effect of civilization on the autonomic life function. But to thousands of cancer researchers, the fact that cancer is a process of putrefaction in the blood and the tissues seems too banal, too simple to be recognized. Year in and year out, millions of dollars are spent on highly complicated experiments and theories which have no other purpose than that of keeping hidden the simple fact that the cancer cell is a protozoon which develops from biologically spastic and suffocated tissues. Today, almost at the middle of the 20th century, decades after Freud discovered unconscious psychic mechanisms, surgeons attack the brain with the knife in order to "influence psychic functions." More than forty years

ago, cardiac neuroses were clearly recognized to be the result of dammed-up sexual excitation in the organism. Yet, even today, reputable physicians prohibit sexual intercourse to patients with cardiac neuroses, on the erroneous assumption—which only confirms to the patient his neurotic phobia—that sexual intercourse in the presence of hypertension is "dangerous." In brief, medicine and natural science pass by the living, the human included, and are bogged down—all high-sounding talk and all boasting notwithstanding—in the morass of mechanistic thinking of the pigeon-hole variety.

Considering the magnificent technical means at the disposal of natural science, the living functions would have been discovered long ago were it not for the embarrassing fact that they are identical with the natural sexual function, were it not for the fact that the idea of God is identical with the orgasmic excitation in the autonomic life system, and the fact that the neuroses are a universal pandemic in the form of pathological character formations. Even in the latest edition of the Encyclopedia Britannica the word "orgasm"¹ is still conspicuous by its absence,

¹ *Translator's note:* If one looks up the word in standard dictionaries, one finds, for example, the following (italics are mine): "*Immoderate or extreme excitement or behavior*" (Funk & Wagnall's Desk Standard Dictionary); "*Eager or immoderate excitement or action; esp., the culmination of coition*" (Webster's Collegiate Dictionary); "*Eager or immoderate excitement or action; the state of turgescence of any organ; erethism (excessive irritability); esp., the height of venereal excitement*" (Webster's New International Dictionary).

In other words, orgasm is defined as an *abnormal* phenomenon. This is entirely logical because the average individual in our society is orgasmically impotent, and what is "average" is commonly considered "normal." The definition shows clearly that what is considered an orgasm is sexual *excitation* and not its *release*. This again is quite logical because the orgasmically impotent individual knows only sexual excitation (which, in him, as a result of sexual stasis, is always "immoderate") while the orgasmic release of tension is unknown to him.

though, undoubtedly, it gives rise to dirty jokes at cocktail parties or in after-dinner talk. Vacuous merchants of science and politics still dare to poke fun at Freud. Biology of the 20th century has devised highly complicated formulæ which are incomprehensible to any mortal; but in no textbook on protozoa can there be found as much as a mention of vegetative movement and contraction, for they are suggestive of the orgasm reflex. The reason why so many physicists and biologists are religious in the bad sense of the word is that—in spite of all their academism—they are, deep down, not satisfied by their work. The Indians who thrust their sick people into the ground to get the effect of the life energy contained in the soil have more contact with life and its dependence on natural processes than does our whole pharmaceutical industry.

Such facts could be enumerated indefinitely. I do not mention them because I believe that I can change them in any way. I mention them for the sole reason that it is exactly these ossified, mechanistic, unalive, life-alienated academicians who assume the role of "authority," who behave as if they were qualified to judge the validity of bion research and the sex-economic theory of autonomic functioning. After the first encounters with this science paralyzed by panic, I had to explain to my co-workers that there are no authorities in our field, that nobody can presume the right to criticize us without having first studied the material. All these things would hardly be worth mentioning were it not for the fact that neurotic representatives of this kind of science have tried to endanger and destroy our laborious work. Where objective argument fails, they resort to rumor. They are curious, but they take pains to avoid straightforward and simple contact with my laboratory and go asking questions of others instead. It is a fact that Norwegian "authorities" sent emissaries to Malinowski

in London, to Bonnet in Paris and to Du Teil in Nice, in order to find out what on earth I was doing. They could have reached my laboratory in Oslo by a fifteen minutes' journey on the streetcar. Nevertheless, there is ample interest, and it shall not be disappointed. The only way in which I can counter indecent behavior is by setting the facts into focus.

The attitude of the various organizations of scientific specialists toward our work is extremely confused. The psychiatrists seem unable to establish contact with the biological foundation of their own field of work. It seems as if psychiatry were unwilling to take the responsibility either for a comprehension of the mind-body problem or for the correction of the biological malfunctioning in the human. The psychoanalysts, on their part, praise me as a "former" good analyst. They even admit having learned a good deal from me; but they deplore my having "gone off on a tangent." They say that they have accepted my character-analysis, with the "necessary corrections," i.e., scrapping the orgasm theory; but, they say, what I have been doing in recent years is downright crazy, or incomprehensible at best. They did not see that what had happened was that Freud's psychology had been put on a solid biological foundation and was no longer a mere superstructure without a basis in natural science. This achievement took place precisely in that decade during which psychoanalysis, for the very lack of such a foundation, split up into all kinds of factions.

In another group there are the biologists, physiologists, and internists. They do not know at all what to do with the psychology of the instincts; they are completely untrained in sexology and in questions of the dynamics of the instinct; thus, their reactions to bion research are in no way influenced by any insight into the problems at hand. Nevertheless, the connection is very simple. *The orgasm is a central*

problem of living functioning in general and orgasm research had of necessity to strike roots in biophysics.

In still another group, there are the economists and sociologists. Sex-economy has made recognized and essential contributions to the understanding of irrationalism in politics and in society. But the economists and sociologists are bogged down in the mechanics of figures and in a rationalistic kind of thinking which belongs to the 19th century to such an extent that they are completely helpless in the face not only of any kind of psychology based on natural science, but, quite particularly, in the face of the irrational happenings of our times. All they do is to put down that what happened *did* happen; this, though, they do with a great show of dignity. I shall not even mention the politicians who play the role of saviors of humanity. Their knowledge is in inverse proportion to the vehemence of their savior's gestures.

Thus we find ourselves in an embarrassing, even dangerous situation. We went—at first gropingly and later systematically—to the roots of living functioning; we do not ourselves know as yet what will be the consequences of a comprehension of the dynamics of the instincts; and we find ourselves more and more isolated from the customary and recognized forms of thinking, the forms of thinking which have driven human society to the verge of ruin. We have become alien to them and they to us. In fact, it often seems to us that we can understand, here and there, a bit of their thinking and reacting out of their ignorance of the dynamics of living functioning. We are often disinclined to recognize the irrational in serious scientists; yet, in order to do our work and our research, we are forced to look for the irrational in ourselves every hour of the day. Thus, there seems no reason why other branches of science like physics, chemistry or sociology

and their representatives should be exempt from a scrutiny of the irrational contents of their statements and their research methods. After all, the physicists, the chemists and the sociologists are no more, but also no less, affected by the neurotic pestilence than other mortals.

We, with our background of depth psychology, are always looked upon with some contempt because psychology is not considered an "exact" science by the "pure" natural sciences. However, my contention is not only that psychology has now been put on an exact, experimental foundation, but also that those are correct who again and again point out that that branch of research which will really comprehend the emotional plague at the biological core of the human organism and which will show ways and means of mastering it biologically as well as socially, will finally decide the fate of the world. Whatever the progress of the mechanistic natural sciences and of civilized technic may be, they have not brought us an iota closer to an understanding of the psychic pestilence in the human. They have demonstrated their complete incapacity to solve human, that is, social problems. All the electron research, all the atom-smashing, all the expanding of the universe notwithstanding, human misery continues unabated: every day and every hour our children are being tortured and are having their psychic backbones broken, there is cancerous putrefaction of living tissue, there is nonsensical and aimless slaughter of millions of humans, and there are pederasts and impotent neurotics who can determine whether and when millions of people will lose their homes.

It is my conviction that the discovery of the biological energy, that energy which is at the basis of our feeling for life, our vegetative sensations, actions, religious feelings and cosmic phantasies, will provide a solid scientific foundation for the cultural process. Many pillars of the mech-

anistic conception of the universe will tumble. There will be new concepts in natural philosophy, concepts which will lead to the full recognition and social effectiveness of the dynamic, *living* process of nature.

If we are to do our work and are not to fail, we finally have to become clear in our own minds as to our position in the world of science:

1. There is, in the fields of sex-economy and orgone biophysics, no authority save that acquired by work and achievement in these fields.

2. Sex-economy and orgone biophysics are not a branch of medicine or even psychiatry. They are a special branch of natural science which reveals new facts not only to medicine and psychiatry, but to education, physics and biology as well. Sex-economy, as a new branch of natural science, takes its own place among the natural sciences on an equal footing with the others. It is autonomous, no matter whether some physicist, biologist, psychologist or medical man concedes this autonomy or not. In order to be really autonomous, it must first realize this autonomy itself.

But to achieve this realization of our own autonomy is impossible without a clear and radical understanding of the motives which have thus far prevented the human from comprehending the living function. The orgone energy is what conveys those feelings of life (demonstrable at the oscillograph) which humanity, for millennia, has been calling "God." It is present "everywhere"; it is responsible for the existence of living matter; it is a cosmic energy and it creates many of the typical attitudes which are held in high esteem by genuine religion.

I recently had to revise some of my earlier evaluations of religion. There was a time when I believed, with the rationalist Marxists, that religion was a conscious invention of the ruling class for the pur-

pose of dominating the ruled classes. There was a time when I believed, with the psychoanalysts, that religion was a compulsion neurosis, that there was nothing genuine in religious feelings, that, in other words, there were no "oceanic feelings," no "cosmic sensations," that, in short, religion, with everything that belongs to it, was an "illusion."

Now, it is true, without doubt, that brutal ruling forces utilize the existing religiosity of the masses the better to suppress them. But that does not mean that the ruling interests of money or political power created these religious feelings in the masses. Also, there is no doubt that most religious ideas are of an illusionary character in the sense that we recognize as unrealistic the ideas of "God," of sin, of salvation and of a return of the dead. However, all this does not alter the existence and the reality of religious and cosmic feelings and sensations, whatever their ideational expression may be. Though there is no personal God, yet there is doubtless an extremely powerful feeling which brings humans to the point of believing in the existence of a personal God. We have to make a sharp distinction between the *ideational content* of religion on the one hand and the *religious feeling* on the other hand; the former is clearly unreal, while the latter is a *decisively important reality*.

No doubt, humanity has always known of the existence of the biological orgone energy; only, this knowledge took the form of the religious and ecstatic experiencing of their bodies and sensations. All genuine legends of creation give us the picture of a cosmic (supernatural) power which created the world and man and governs them. Man—incapable of comprehending and mastering this power—could only feel himself as its object, its toy and its product; he could experience this power only as something to which he surrenders and which not only governs him

but by which he *likes* to be governed; for orgone energy functions, biologically, as *pleasure energy, as biological pulsation*. This explains man's enormous readiness to give himself over to religious feelings and to be governed by them. Up to the discovery of the orgone and the vegetative currents, the world of vegetative sensations was not only being denied, but excluded from any scientific discussion. The functioning of the life energy finds its direct subjective expression in these vegetative sensations; it is at the basis of all mystical practices, such as Yoga and the fakirs' methods of voluntarily influencing the involuntary life functions, the irrational contentions of astrology and Fascist irrationalism; but it is also at the basis of the folk dance and the folk song, of music in general, of the scientific phantasies of the great discoverers and the philosophy of great poets and sages. One may say that the discovery of the cosmic life energy which, indeed, functions before the eyes, noses and ears of the scientists, functions in their very senses and nerves, was prevented by the passive submissive attitude of the human. More than that: that which governs the world today and has power, is not only alien to the feeling of living beings, it is hostile to it; as if it were especially designed to smother it. Let us beware of this human attitude!

As long as people believed that diseases were caused by evil spirits they were not able to assume an active attitude toward disease. In order to discover the orgone energy, the fear of that which moves spontaneously, of that to which we owe our existence, had to be overcome. To master it, it was necessary first of all to achieve a scientific comprehension of the autonomic vegetative sensations, of that which Bergson so splendidly described as the sensation of time duration in the ego. We understand now the religious prohibition of "Knowing God," the belief that He can only be experienced and felt. *It is a prohi-*

bition which the human, motivated by fear, imposes on himself, a taboo against lifting the veil of secrecy from the origin of life. To this taboo, we owe the devastating psychic pestilence. Due to this taboo, any serious attempt at such discoveries seems a sacrilege. It is as if there were some temple to see the inner sanctum of which is the deepest longing of every human being; great people have sacrificed their lives in the attempt. At the same time, anyone who does dare to penetrate into the inner sanctum and tries to lift the veil, is stoned by these same human beings—because he dared to touch on that which is most sacred to them. It is the same with orgasmic excitation; one wants to experience it but one does not want to hear it mentioned.

This seems to be the reason, too, why the atmospheric, cosmic orgone energy was not discovered long ago, and why mechanistic science behaves irrationally, even runs amok, as soon as it comes in contact, in whatever form, with the problems of the autonomic movement of the living, the problems of vegetative sensations and that of the autonomic, orgasmic plasma contraction.

My attitude, as expressed here, will be called aggressive. What is aggressive and destructive in reality, however, are the reactions of this psychically sick world and not we, who only advocate simple and clear facts. These facts ask to be seen. They ask to be mastered. They ask not to be covered up by academism and clericism; they ask to be uncovered. Humanity, living as it does in material, intellectual and sexual misery, dreams forever of work, freedom and happiness in life. Natural science has the task of turning this dream into reality. Everything else is nothing but idle talk! A drowning man, fighting for his naked life, will not ask for learned discussions of the chemical composition of water. He has to learn to swim, if he is not to drown. Human society is drowning,

and the vegetative sensations are the water. Instead of drowning in their mystification, society must learn to understand and govern them. This fact is not going to be altered by any new campaign on the part of self-styled "authorities," or of party politicians, or of neurotic moralists, or of

out-of-the-world specialists (or by senseless arrests and detentions—Ed.). The attempts at a rational mastery of human mysticism may again and again be nullified, but there will be ever new attempts—and finally the natural facts of living functioning will win out.

THE DISCOVERY OF THE ORGONE*

Experimental investigations of biological energy

By WILHELM REICH, M.D.

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Objective visibility

INTRODUCTION

In the following series of articles on the discovery of the orgone an attempt will be made to present the results of the bion research carried on between 1936 and 1942. A part of these findings was published in my book, *Die Bione* (1938), and in "Bion Experiments on the Cancer Problem" and "Drei Versuche am Statischen Elektroskop" (1939). Since then, nothing has been published on the subject; partly because of the transfer of the laboratory from Oslo to New York, partly because it was necessary first to coordinate the numerous findings. From October 1939 until the summer of 1941, orgone radiation experiments were carried out in cancer mice. In March 1941, orgone therapy experiments were begun in otherwise hopeless cases of

human cancer.¹ Sex-economic cancer research had started long before that, namely in 1933 when the attempt was made to correlate the most important findings of cancer pathology with the sex-economic findings concerning the functions of the vegetative system.

Thus, this series of articles deals with the clinical and experimental findings of almost 10 years. This makes the task an extremely difficult one. On the reader, it makes the demand of his having to become acquainted with the medical concepts of sex-economy; of the author it demands a frank presentation of all uncertainties and shortcomings of this research.

Some readers may ask why this or that experiment was not also carried out, why

* Translated from the manuscript by the Editor.

¹ Cf. "The carcinomatous shrinking biopathy." *This issue*, p. 131.

this or that substance was not also investigated. I am painfully aware of many such gaps. They are, however, not my fault, but largely that of the circumstances under which the work had to be carried on. Several academic organizations which could have lent their financial support considered the whole thing, on the basis of individual, unrelated findings, so fantastic that I had to decide to maintain my independence and to get along without outside help. This is necessary in order to protect the work against misinterpretations before the publication of the total findings. The experimental work consumed practically my whole income; during the years of 1940 and 1941 alone it cost more than \$10,000. Adequate research facilities would have required hundreds of thousands of dollars. The limitation in the use of materials, apparatus and experimental set-up simply reflects the limits of my economic capacity. I know that any average physical laboratory aided by government or foundation funds could have applied the findings to an infinite number of materials and set-ups. As well-equipped as my laboratory is in itself, the problems that presented themselves went far beyond its capacities. Nevertheless, the fundamental groundwork has been done which can form the basis for more extensive investigations.

Many of the facts which in orgone biophysics converge into a comprehensible unit can be found in the literature of physics, unrelated and more or less arbitrarily interpreted. The fact of the atmospheric orgone energy, however, is nowhere mentioned. In succeeding articles ample reference will be made to the literature, at a time when we shall discuss the experimental investigation of the connecting links between orgone and electricity. In the course of time, the reader will convince himself that what often appears to be naïveté is actually deliberate exclusion of prejudice and that it leads to decisive new conclusions in the theory of electricity.

I. THE FUNCTION OF TENSION AND CHARGE.

1. THE FUNCTION OF THE ORGASM

Those who are familiar with sex-economy know of the important event which, in 1933, represented the turning point in our research: *the discovery of the biological function of tension and charge*. I should like to give here a brief résumé of these developments.

Clinical investigation had shown us that the function of the orgasm is the key to the problem of the energy in the neuroses. Neuroses are the result of a stasis (damming-up) of sexual energy. This stasis is caused by a disturbance in the *discharge* of sexual energy in the organism. It makes no difference whether this fact is perceived by the ego or not; nor does it matter whether the psychic apparatus misinterprets this process in a neurotic manner, or what kind of ideologies the individual develops around the disharmony in his energy system. Everyday clinical experience leaves no doubt: *The elimination of sexual stasis through orgasmic discharge eliminates every neurotic manifestation*. The difficulties involved in this therapeutic task are chiefly of a social nature. It is necessary to point out these simple basic facts again and again.

Sex-economy had known for a long time that the orgasm is a *fundamental biological phenomenon*; fundamental because the orgasmic energy discharge takes place at the very roots of biological functioning. This discharge takes place in the form of an involuntary contraction and expansion of the total plasma system. Like the respiratory function, it is a basic function of any animal system. Biophysically speaking, it is impossible to distinguish the total contraction of an ameba from the orgasmic contraction of a multicellular organism. The outstanding phenomena are *intensive biological excitation, repeated expansion*

and contraction, ejaculation of body fluids in the contraction, and rapid reduction of the biological excitation. In order to comprehend these phenomena as biological functions, we had, of course, to rid ourselves of the lascivious reactions which usually accompany any occupation with sexual functions and autonomic life functions in general; these very reactions, in the form of neurotic attitudes and symptoms, form an important object of our psychiatric work.

In its quickly alternating expansions and contractions, the orgasm shows a function which is composed of tension and relaxation, charge and discharge: *biological pulsation*.

Closer investigation reveals the fact that these four functions appear in a definite four-beat: the mechanical tension, which shows itself as sexual excitation, is followed by a bio-electric charge of the periphery of the organism. This fact was unequivocally demonstrated by measuring the bio-electric potentials occurring with pleasurable excitation of the erogenous zones. When tension and charge have reached a certain degree, there occur contractions of the total biological system. The high peripheral charge of the organism is *discharged*. This is seen objectively in the rapid decrease of the bio-electric skin potential; it is felt subjectively as a rapid decrease in excitation. The sudden shift from a state of high charge into that of discharge is called the "acme." The discharge of bio-electrical energy is followed by a mechanical relaxation of the tissues through a flowing back of body fluids. That we are actually dealing with a discharge of energy is shown, among other things, in the fact that for some time after the discharge the organism is incapable of sexual excitation. This is the condition which, psychologically, we call "gratification." The need for gratification, or, in biophysical terms: *for the discharge of the surplus energy in the organism by*

way of fusion with another organism— makes itself felt at more or less regular intervals. These intervals vary from individual to individual as well as from species to species. They usually become shorter in the spring; in animals, one finds the phenomenon of rut or heat, a concentration of this biological need in certain seasons, predominantly the spring. This fact points to a close connection between the function of the orgasm and an energy function of a cosmic nature. The orgasmic function, together with the known effects of the sun on the living organism, is one of the phenomena which shows the living organism to be a part of non-living nature.

Thus, the function of the orgasm is expressed in the four-beat: *mechanical tension → bio-electrical charge → bio-electrical discharge → mechanical relaxation*. We shall call it for brief the *function of tension and charge*.

We know from earlier investigations that the function of tension and charge is characteristic not only of the orgasm. It applies to all functions of the autonomic life system. The heart, the intestines, the urinary bladder, the lungs, all function according to this rhythm. *Cell division*, also, follows this four-beat. So does the motion of protozoa as well as metazoa. Worms and snakes show this movement according to the formula of tension and charge particularly clearly, in the movements of their parts as well as their totality.

Thus it is obvious that there is *one* basic law which governs the organism as a whole as well as its autonomic organs. The total organism contracts in the orgasm just as does the heart with every pulse beat; the medusa as a whole contracts just as does the vacuole it contains. This biological basic formula comprehends the essence of living functioning. *The orgasm formula shows itself to be the life formula as such*. This corresponds exactly to our previous formulation that *the sexual process is the productive biological process*

per se, in procreation, work, *joie de vivre*, intellectual production, etc. To recognize or to refute this formulation is to understand or to reject sex-economic biophysics.

The mechanical tension of organs through tumescence is easy to understand: it consists in taking up fluid and in a separation of the particles in the biological colloid. Conversely, mechanical relaxation consists in giving off fluid and mutual rapprochement of the particles. The question as to the *nature* of the process of charge and discharge presents a more difficult problem. The possibility of measuring the electrical potentials could easily lead us to discard the whole problem by calling the process one of "electrical charge" and "electrical discharge." After all, electrical energy was measured in the contracting muscle and the "electric eel"; one is even able today to measure the electrical "brain waves." In reporting on my bio-electrical experiments (1934-1936),¹ I gave the changes in potential occurring in pleasure and anxiety in millivolts.

2. THE POSTULATE OF A SPECIFIC BIOLOGICAL ENERGY

Is the specific biological energy identical with electricity? This is not as simple a question as it may appear. Certainly it would be highly satisfying if we could express the function of the orgasm in the familiar terminology of physics. The organism, then, would be nothing but a "particularly complicated electrical machine." It would be very pleasant and convenient to explain the reaction of rheumatic people to weather changes by stating that the "body electricity" was being influenced by the "electric" charges in the air. The attempt has also been made to apply the laws of iron magnetism to the living organism. We say that a beloved person has a "magnetic" attraction, that excitement "electrifies" one. We shall soon see that such analogies are erroneous. In earlier publications, I spoke

of "bio-electricity," following the usual terminology. No doubt, there is electricity in the organism, in the form of electrically charged colloid particles and ions. Colloid chemistry as well as muscle physiology operate with it. Muscles can be made to contract by the application of an electric current. In combing our hair, we get "electric" sparks.

Nevertheless: *There are a number of phenomena which are completely at variance with the theory of electromagnetic energy.*

First of all, the effects of bodily "magnetism." Many physicians and lay therapists use these magnetic forces in a practical way. But to us, it is not conceivable that these forces which emanate from organic, colloidal, non-metallic material should be magnetic forces. We shall provide experimental proof for the fact that the energy we are dealing with in the living organism is not identical with iron magnetism.

If a faradic current is applied to our body, we experience it as alien to the body, as not "organic." Electrical energy, even in the smallest quantities, produces only disturbances of normal functioning if applied to the muscles, i.e., they show unnatural, uncoordinated, "senseless" contractions. It is altogether impossible to produce, by applying an electrical current, an organic movement which would have the slightest resemblance to the everyday living movements of whole muscle systems or functional muscle groups. The electrical current produces a movement in which the essential characteristic of biological energy is lacking: the movement of a *group* of organs in a *coordinated, functionally meaningful form*. On the other hand, the *disturbances* of biological functioning by the electrical current shows distinctly the character of electrical energy. The resulting movements are rapid, jerky, and angular, exactly like the oscillographic phenomena which one obtains by rubbing

an electrode on metal (cf. "The Function of the Orgasm," p. 348, fig. 7).

If an electric current is applied to a muscle-nerve preparation, the electric current is not expressed as such in the resulting movement. If it did, the smooth muscle would contract just as quickly as the striated muscle. In reality, the smooth muscle does not contract like the striated one, but in the form of a slow, wave-like movement which is characteristic of the smooth muscle. That is, an unknown "something" is interpolated between the electric stimulus and the muscle action. It is only induced by the electric stimulus and manifests itself as a movement which is accompanied by an action current. But this "something" is not electricity.

Our own sensations tell us distinctly that the emotions (which undoubtedly are manifestations of our biological energy) are something basically different from the sensations caused by an electric shock. Our sense organs fail completely to register the electromagnetic waves though the atmosphere is full of them. We feel nothing in the proximity of a radio-transmitter. We do not react to the proximity of a high-tension wire the way a radio apparatus does. If our life energy were electricity, the fact that we react to the wave-lengths of visible light but not to the other wave-lengths would be incomprehensible—since our perceptions are an expression of this life energy. We are insensitive to the electrons of an X-ray machine as well as to radium rays. Electrical energy does not convey a biological charge. Thus far it has been impossible to express the potency of vitamins in electrical measurements, although there can be no doubt that they contain biological energy. These examples could be multiplied indefinitely. One might also ask how it is possible that our organism does not get destroyed by all the electromagnetic fields which surround it.

True, we can influence sensitive volt-

meters by touching them, but the magnitude of this reaction is so infinitesimal—compared with the energy quantities in the organism—that we cannot see any connection.

We are dealing here with gigantic contradictions, contradictions which are insoluble within the framework of the known forms of energy. They have been occupying the minds of biologists and natural philosophers for a long time. Attempts were made to bridge the gap with concepts which were to make comprehensible the specific *living* functioning. Such attempts were made primarily by the opponents of mechanistic materialism, by the vitalists. Driesch, e.g., tried to solve the problem by introducing the concept of "*entelechy*," a vital energy pertaining to living matter and governing it. As this energy was not tangible and measurable, his concept was doomed to lead into metaphysics. Bergson's "*élan vital*" also took into account the incompatibility of the known forms of energy and living functioning. His "*force créatrice*" represents an explosive function of matter, manifesting itself most clearly in living functioning. Bergson's hypothesis was directed against mechanistic materialism as well as teleological finalism. It comprehended correctly the basically *functional* character of the living but it lacked empirical substantiation. The force in question was neither measurable nor tangible or otherwise capable of being influenced.

The well-known German physiologist Pflüger, on the basis of the function of cyanide, assumed a connection between life energy and fire. His assumption was correct. Prominent biologists, as for example Kammerer, postulated the existence of a *specific biological energy* which would have no immediate connection with electricity, magnetism and other known forces.

If I should . . . give a scientific credo which as yet is impossible of proof, I must

say: the existence of a *specific life force* seems highly probable to me! That is, an energy which is neither heat, electricity, magnetism, kinetic energy (including oscillation and radiation) nor a combination of any or all of them, but an energy which specifically belongs only to those processes that we call "life." That does not mean that this energy is restricted to those natural bodies which we call "living beings"; it is present certainly in the formative process of the crystals. Perhaps, for this reason, it would be better to term it "formative energy" instead of life energy. But this energy is nothing "supraphysical," although it is unlike any of the known physical energies; it is no mysterious "entelechy" (Aristotle, Driesch), but a genuine, natural energy; only, as electrical energy is linked up with electric phenomena, chemical energy with chemical processes, so is this energy linked up with phenomena of life and of the development and change of forms. It certainly follows the law of the conservation of energy; it is convertible into other forms of energy as, for example, heat is converted into kinetic energy and vice versa. (Kammerer, *Allgemeine Biologie*, p. 8).

Kammerer had been led to the problem of a "formative life energy" by his experiments on the heredity of acquired characteristics. The concepts of "inherited substances" and "genes" held dear by the heredity theoreticians only obscured the problem of living functioning, as if devised for the very purpose of blocking any access to the problem. Like a pyramid put on its tip, their theory consisted of a heap of hypothetical contentions, based on an extremely small basis in fact, and a doubtful basis at that. One only has to remember the unscientific, unwarranted and moralizing consequences drawn from the famous "family Kalikak." In reading hereditary hypotheses one has more the impression of treatises on ethics than of science. The living function gets smothered in a heap of mechanistic hypotheses. These theories finally degenerated into

the disastrous Hitlerian theory of race.

With the vitalists, the living became a mysterious ghost-like thing, with the mechanists a lifeless machine. With the bacteriologists, there is, for each living organism, some special germ "in the air" which as yet nobody has seen. In the second half of the 19th century, Plouchet undertook the laborious task of examining the correctness of this theory. Pasteur showed experimentally that liquids which have been exposed to high temperatures contain no living germs. If he found living organisms, he ascribed their presence to air infection. In his "*Geschichte des Materialismus*," Lange criticizes Pasteur's interpretation and points to Plouchet's experiments. Plouchet passed great quantities of air through water and then examined it. He invented a special apparatus in which air was blown against glass plates on which the dust particles were deposited. He then examined the deposited dust. He carried out these experiments on glaciers in the Pyrénées, in the catacombs of Thebes, on land and on the sea in Egypt, and on top of the cathedral of Rouen. He found all kinds of things, but only extremely rarely a spore of a fungus or a dead infusorium. Pasteur's refutation of the primitive theories of spontaneous generation has been thoroughly misunderstood. There was a taboo against asking the question as to where the *first* germs of life came from. In order not to come into conflict with the assumption of a "Divine Creation," one took recourse to a plasmatic substance which was supposed to reach our planet from the universe.

None of these schools was ever able to penetrate to the functional problems of the life process or to achieve a connection with experimental physics. The living continued to be an incomprehensible, intangible mysterious something, a special preserve of Divine Providence, like an island in the gigantic field of experimental natural science.

Nevertheless, the sprouting of every plant, the development of every embryo, the spontaneous movement of every muscle and the work done by every biological organism daily demonstrate the existence of gigantic energies governing the working of the living substance. "*Energy*" is *the capacity to do work*. There is no known energy that could compete with the work of the total life apparatus of our planet. The energies which achieve this work can derive only *from non-living matter* itself. They have remained a closed book to science for thousands of years.

What is the block that kept humans from the comprehension of this energy? Freud's discovery of the function of sexual repression was the first breach in the wall which separated us from a comprehension of the living; the understanding of the manifestations of the unconscious and repressed sexual life was the first step. The second step was a correction of Freud's theory of the unconscious: The repression of the instinctual life is not a natural phenomenon; rather, it is a pathological result of the suppression of natural instincts, in particular, of genital sexuality. An organism which uses most of its energy for keeping living nature hidden in itself must of necessity be incapable of comprehending the living outside of itself. The central manifestation of the living is the genital sexual function. This is what life owes its existence and continuation to. A society of humans which has outlawed the most essential manifestation of this function and has made it unconscious is incapable of guiding the vital functions in a rational manner; they can express themselves only in distorted, pornographic forms. It was only the mystics who—far removed from scientific insight—always kept in contact with the function of the living. Since, thus, the living became the domain of mysticism, serious natural science shrank from occupying itself with it. The biological and physiological literature shows no trace

of an attempt to understand the autonomic movement such as it is expressed, e.g., in the movement of a worm. It is too reminiscent of the sexual acts in the animal world. Thus, there is mysticism on the one hand, and mechanistic biology on the other. At the same time, the force of religious feelings in itself points to the existence of a powerful something which the humans, though feeling it, are unable to put into words or to govern. Religion, also, has mystified the living.

The whole problem comes within the realm of natural science only if and when we have an energy function which is measurable and capable of being influenced, which makes the basic functions of the living comprehensible and, at the same time, does not come into conflict with physics.

The functions of the living show that such a specific biological energy would have the following characteristics:

1. It would be basically different from electromagnetic energy and yet have a relation to it.
2. Assuming the origin of the living from the non-living, it would have to exist in non-living nature, independently of the living organism.
3. It would have to explain satisfactorily the relationship between living organisms and non-living nature (respiration, orgasm, nutrition, etc.).
4. Contrary to galvanic electricity—it would function on *organic material* which is a *non-conductor* for electricity, and animal tissues.
5. Its function could not be restricted to isolated nerve cells or cell groups, but would permeate and govern the *total* organism.
6. It would have to explain, in a simple way, the pulsating basic function of the living, *contraction* and *expansion*, as it is expressed in respiration and the orgasm.
7. It would express itself in the produc-

tion of heat, a characteristic of most living organisms.

8. It would definitely explain the sexual function, i.e., it would make sexual attraction understandable.

9. It would explain why the living organisms have not developed an organ for electromagnetism.

10. It would help to explain the difference between protein that is dead and protein that is alive; that is, it would explain what has to be added to the chemically complicated protein in order to make it *alive*. It would have the capacity of *charging* living matter, i.e., it would act in a *life-positive* sense.

11. It would, finally, have to show us the mechanism of the symmetry of form development, and what is the function of form development in general.

These questions are nothing but the indispensable framework for any discussion of biogenesis and of biophysical problems.

II. SUMMARY OF THE RESULTS OF THE BION EXPERIMENTS.

The biological energy was discovered in a certain culture of bions. Thus, I will have to explain briefly what bions are.¹

The bions are forms of transition from inorganic to organic matter; they can develop into organized living forms such as protozoa, cancer cells, etc. They are vesicles filled with fluid and charged with energy; they are clearly visible only with a magnification of over 2000x. "Bion" means the same as "energy vesicle." Their biological characteristics and their energy reactions will be extensively dealt with in a subsequent article.

The bions originate in organic and inorganic matter through a process of swell-

ing. In this process, matter disintegrates into fluid-containing vesicles of about 0.5 to 3 μ . The following substances disintegrate into bions, either by swelling alone or through high temperatures with consecutive swelling: Wood, thus forming humus (wood does not "rot"; if kept in water for weeks on end, it remains sterile, i.e., free of rot bacteria, and the development of protozoa is reduced to a minimum). Further, dried moss and grass; muscle and other animal tissue; wool, coal, soot. Of inorganic substances, according to observations to date, iron and silicates show bionous disintegration. A great many substances consist of bions, i.e., they are made up of energy vesicles: most food stuffs, egg yolk, boiled egg white, milk, cheese, cooked vegetables, meat, vitamins; further, all substances which have been heated to incandescence or owe their existence to such a process: cyanide of potassium, lava, soot, etc. The gonadal cells and the erythrocytes are bions. The chicken embryo develops through organization of the yolk bions, moss from stone bions, protozoa from moss or grass bions. Cancer cells develop from bions which originate from the vesicular disintegration of suffocated or otherwise biologically damaged tissue.

The bions contract and expand, that is, they already show the function of biological pulsation. They move through the microscopic field with slow, jerky or serpentine movements. They react positively to biological stain (Gram, methylene blue, carbol fuchsin, etc.). If viewed with apochromatic lenses at a magnification of at least 2000x, preferably 3-4000x, their content always shows a bluish glimmer, no matter what substance they were derived from. The contents of the vesicles show extremely fine vibrations and refract the light strongly. Under definite strict and difficult conditions, the bions can be cultivated. They show the function of division and fusion.

¹ A detailed presentation of the bion experiments up to 1939 is found in "*Die Bione*" (1938) and "Bion Experiments on the Cancer Problem" (1939). Since 1939, these experiments have been elaborated considerably; the additional findings will be reported in a special article.

The motility of bions derived from soot, blood charcoal, blood, muscle tissue, etc., lasts only as long as the fine pulsatory movements, the blue color of the content, and the colloidal suspension lasts. The bions are cataphoretically positive or negative. With the cessation of colloidal suspension and cultivability, the cataphoretic reaction also ceases.

The microphotos (*see* footnote, p. 115) will convey a better impression of the bions and their organization into protozoa than the written word. However, as everywhere else in natural science, only continued microscopic observation will convey a convincing impression of the nature and the living reactions of the bions.

The biological reactions of the bions became comprehensible only by thinking of the bions in terms of a membranous vesicle *containing a certain quantity of energy*. Bions of different origin can permeate each other. Larger vesicles or heaps of vesicles incorporate smaller ones. Bions which emanate a strong blue glimmer kill or paralyze bacteria and small protozoa. They destroy cancer tissue by permeating it. Ameboid cancer cells from mice are paralyzed by certain kinds of bions even at a certain distance. In brief, all these—and other—functions point to enormous energies which are contained in the bions and have a powerful biological effect on their surroundings. This concept found an unexpected confirmation in certain bion cultures which I obtained from sand (*see* below).

For an understanding of the bions, a knowledge of the following facts is indispensable:

1. All matter—if exposed to high temperatures and made to swell—undergoes a process of vesicular disintegration.

2. High temperatures (autoclavation at 120°C, heating to incandescence, about 1500°C) destroy what life there is. But these same high temperatures produce the

energy vesicles which in turn can develop into living bacteria.

3. The energy at work in the bions is not introduced into them artificially from the outside; rather, it originates from the vesicular disintegration of matter itself.

4. An energy vesicle is a minute quantity of matter, containing a quantity of energy derived from this matter.

5. The bions are not complete living beings, but only carriers of biological energy; they are forms of transition from non-living to living.

6. The blue color of the content is the immediate expression of this energy. As the blue disappears, the essential biological characteristics of the bions disappear also.

7. The bion experiments do not newly "create" artificial life; they only *demonstrate the natural process* by which protozoa and cancer cells develop spontaneously from vesicularly disintegrated matter. They also demonstrate the natural form in which biological energy is contained in humus, in inorganic material, in food-stuffs, blood cells, gonadal cells, etc. The functions of the biological energy in the realm of the living do not become understandable until one first learns to understand them in the realm of the non-living, that is, in the realm of *physics*.

III. THE CULTURES OF RADIATING SAND BIONS.

In order to completely refute the objection of air infection, I began as early as 1936 to autoclave the bion preparations for ½ hour at 120°C. In doing so, I found that the bionous disintegration was now even more complete than with swelling alone. The blue bions appeared more quickly, the biological stain reaction (Gram, etc.) was more intense. In May 1937, I began to heat coal and earth crystals to incandescence before putting them into the solution which promotes swelling. This procedure accelerated the formation

of bions still further. Now, with complete sterility assured, the bionous disintegration of matter could be achieved within a few minutes. No longer did I have to wait for days or weeks until the process of swelling at room temperature finally resulted in bions. To make the substance swell, I used KOH and potassium chloride. For more than 2 years (1937-1939), experiment after experiment confirmed the bionous disintegration of matter and the organization of bacteria and cells from the bions.

In January 1939, one of my assistants demonstrated the heating experiment to a visitor of the laboratory. She took the wrong container from the sterilizer, and instead of earth she heated ocean sand. After 2 days there was a growth in the bouillon - potassium - chloride solution, which, inoculated on egg medium and agar, resulted in a yellow growth. This new kind of culture consisted microscopically of large, slightly mobile, intensely blue packets of energy vesicles. The culture was "pure," i.e., it consisted of only one kind of forms. At 400x, they looked somewhat like *sarcinae* as they are occasionally found in water. Examination at 2000-4000x showed forms which refracted light strongly, consisted of packets of 6 to 10 vesicles and measured about 10 to 15 μ . In the course of several months, the experiment was repeated 8 times, and 5 times the same forms were obtained. (Cf. figs. 2 and 3, facing page 128).

These bions were termed SAPA (*sand, packet*). They showed some extremely interesting characteristics.

The effect of the SAPA bions on protozoa, bacilli in general and T-bacilli in particular, was much stronger than that of other bions. Brought together with cancer cells, they killed or paralyzed the cells even at a distance of about 10 μ . When cancer cells came as close as that to the bions, they would remain, as if paralyzed, in one spot; they would turn around and around in the same spot and finally be-

come immobile. These phenomena were recorded by microfilm.

For weeks, I examined these SAPA bions daily for several hours. After some time, my eyes began to hurt when I looked into the microscope for a long time. As a control experiment, I used a monocular tube; regularly, it was only the eye with which I looked at these cultures that began to hurt. Finally, I developed a violent conjunctivitis and had to see the ophthalmologist. He thought the story "fantastic," gave me some treatment, prescribed dark glasses and prohibited microscopic work for a few weeks. The eyes improved, but now I knew that I was dealing with a radiation. Several months before this occurrence, the Dutch physicist Bon had asked me in a letter whether I had ever observed radiation in my bions. I had to answer in the negative. Dr. Bon had been in a feud with his fellow physicists for years because of his contention that life was a phenomenon of radiation.

Now, I was directly confronted with this fact. I did not know how to approach it. Though I had training in the basic theoretical problems of physics, I had never done any practical work with radiation. This created a considerable difficulty but also had its advantages. For this radiation turned out to be something new with characteristics all of its own. The customary methods of radiation research gave no results. The orgone radiation required the elaboration of special, hitherto unknown methods and apparatus which could be achieved only step by step, by long-continued observation. Routine and schematic methods failed.

In a very primitive manner, I tried at first to test the culture for radiation by holding the test tubes containing them against my palm. Every time I felt a fine prickling, but I was not sure of the sensation. After that, I put a quartz slide on the skin, put some SAPA culture on it, and left it for about 10 minutes. On the spot where the

culture had been (separated from the skin by the slide) there developed an anemic spot with hyperemic margin. This experiment I repeated with all my students, whose vegetative reactions I knew well from their training. Those among them who were vegetatively strongly mobile regularly gave a strong positive result; those with less emotional mobility reacted only slightly or not at all. This was a more definite result, but still quite incomprehensible.

So I sought help from the radium physicist of the Cancer Hospital in Oslo, Dr. Moxnes. He tested a culture with the radium electroscope. *There was no reaction.* The physicist declared "there was no radiation." Since his electroscope was designed for radium only, I objected that the negative result meant only that there was no *radium activity*, but not that there was no radiation at all. Because there was no doubt about the existence of the skin reaction. True, why the electroscope failed to react, I did not understand. The rapidity of the skin reaction indicated enormous energies. While the reddening of the skin in response to X-ray or radium appears only after days, the SAPA reaction appeared within a few minutes. Incidentally, as will be shown later, the negative reaction at the electroscope found its logical explanation.

The following observations clarified the problems bit by bit:

After two weeks, my left palm was strongly inflamed and very painful. The fact that the cultures exerted a biological influence could no longer be doubted.

Gradually, I began to notice that the air in the room where the cultures were kept became extremely "heavy" and that people who stayed in the room developed headaches if the windows were closed for as short a time as one hour.

One day, in the course of some experiment, I noticed that all metal objects, such as scissors, pincers, needles, etc., were

highly magnetic. I could not in the least understand this fact though today it seems a matter of course. I had never observed it before and it was quite unexpected. But after having seen the negative reaction at the physicist's electroscope, I was no longer surprised by unexpected findings.

I tried photographic plates in all kinds of ways: I put culture preparations on top of unwrapped plates in the dark, on plates in plate-holders, on plates partly or completely wrapped in lead, with control plates (without cultures) in the same room. To my great surprise, *all* plates which were in the same room as the cultures were fogged. On some plates there was a darkening corresponding to the joints of the wooden plate-holders, in others at places where the culture had not influenced the plate but where the lead wrapping had not been tight. *But the control plates in the same room were also fogged.* I could not understand it. It was as if the energy were active around the ends of the plate-holder and through the joints. *The radiation seemed to be "present everywhere."* On the other hand, it could have been a matter of an experimental error.

In the course of two decades of clinical and experimental work, I had learned to pay attention to such seemingly incidental ideas as "energy present everywhere." They are inklings of the searching organism, and lead to the goal if combined with rigid objective control. In due time, my inkling was confirmed: *The orgone radiation is, in fact, "present everywhere."* But at that time this had no concrete meaning.

The experiment with the photographic plates seemed to bog down. If the effect of the radiation was everywhere, its manifestations could not be isolated and controlled; there was no comparison possible with an object which was not influenced by it.¹

¹ Much later, in the fall of 1940, the photographic demonstration of the SAPA radiation on Kodachrome film succeeded.

I tried observations in dark basement rooms where I kept the cultures. In order to increase the intensity, I made dozens of cultures. The subsequent observations in the dark were somehow "weird." After the eyes had become adapted to the darkness, the room did not appear black, but *gray-blue*. There were fog-like formations and bluish dots and lines of light. Violet light phenomena seemed to emanate from the walls as well as from various objects in the room. When I held a magnifying glass before my eyes, these light impressions, all of them blue or gray-blue, *became more intense, the individual lines and dots became larger*. Dark glasses reduced the impressions. When I closed my eyes, the blue light impressions continued, nevertheless. This was confusing. I did not know as yet that the orgone radiation irritates the optic nerve in a specific manner and produces after-images.

After one or two hours in the basement my eyes hurt and got red. One evening, I spent five consecutive hours in the basement. After about two hours, I could distinctly see a radiation from my palm, my shirtsleeves and (in the mirror) my hair. The blue glimmer was visible as a slowly moving, gray-blue vapor around my body and around objects in the room. I admit that I felt frightened. I called Dr. Bon by long distance telephone and told him of my experience. He told me to protect myself. However, since the radiation seemed to be "everywhere" and seemed to pervade everything, I did not know how I could protect myself.

I had our friend Dr. F. participate in these observations. Without knowing anything beforehand, he confirmed most of my observations. For several months, I subjected one person after another to the skin test and the observation in the dark basement. The descriptions I obtained from all these subjects were so uniform that the existence of the radiation could not be doubted. The most difficult task

was that of *distinguishing the objective phenomena in the room from the subjective phenomena in the eye*. In the course of the investigations, however, numerous techniques of making this distinction found themselves. Thus, I had people reach for luminous objects in the dark or tell me where an arm was at a given time; I let the subjects turn their eyes away from the light impression until it disappeared, and then to try to find it again. The radiation had a highly irritating effect on the optic nerve. A businessman who had gotten a piece of apparatus for me and once took part in the observations, said: "I feel as if I had been looking into the sun for a long time."

This expression on the part of a layman seemed very significant, especially in connection with the conjunctivitis which many subjects developed. One day I had the sudden idea, *sun energy*, and with that, a simple solution to the problem, though it seemed absurd at first glance: *The SAPA bions had originated from ocean sand. Ocean sand, however, is nothing but solidified sun energy. The process of heating and swelling had liberated this energy from the matter*. I fought down my emotional disinclination to accept such a conclusion. If the radiation in question had an immediate connection with sun energy, many phenomena found a simple explanation; e.g., the irritation of the eyes, the conjunctivitis, the rapid reddening and subsequent tanning of the skin. I had carried on these experiments during the winter and early spring, had not been in the sun, and yet had a strongly tanned body. I felt extremely vigorous and vegetatively alive. Gradually, I lost the fear of the dangerous sequelae of the radiation and worked with it without any attempt at protection.

The existence of an energy with an extraordinarily intense biological activity could no longer be doubted. The question was, what was the nature of this radiation

and what methods of measurement could be employed. One of my co-workers told an assistant of the Bohr Institute in Copenhagen about the SAPA bions. She considered the production of bions from sand so "fantastic" that I preferred not to expose my new discovery to a kind of investigation which was biased by disbelief on principle. In addition, I could offer no other starting points for a qualitative and quantitative determination of the radiation than biological effects and subjective sensations. The negative reaction of the cultures at the Oslo physicist's electroscope also was still unexplained. In addition, this was just after the press campaign of the Oslo pathologists and psychiatrists against the orgasm- and bion research; this campaign had destroyed any possible basis for friendly cooperation. Thus, there seemed to be no avenue of approach to a quantitative determination. There was nothing to do but to leave everything to the spontaneous development of the facts and to chance. This "chance" was not long in coming.

While waiting for it, I spent my time reproducing well-known electroscopic phenomena obtained by rubbing various materials. One day, I was in the process of rigging up a new experimental arrangement which involved high voltage. As an insulation, I put on a pair of rubber gloves which used to be kept in a glass cabinet in my laboratory. When I came near the electroscope with my hands, there was a strong reaction; the electroscope leaf moved up and then *turned to the side, toward the glass wall of the electroscope and adhered to it*. The fact that insulators can be "charged" was known to me. What was amazing was the lateral deflection of the leaf and its tenacious sticking to the glass: non-magnetic aluminum adhered to the glass; glass which is an insulator and which *had not been rubbed*. Whence this effect? It turned out that the gloves had been lying close to a pile of SAPA cul-

tures. As a control I put one glove in the open air in the shade while I experimented with the other, exchanging the two after a while. It was shown that the glove which had been kept in the open air for about 15 minutes did not influence the electroscope; on the other hand, if a previously neutral glove or other rubber object was kept together in a metallic enclosure with the cultures for about $\frac{1}{2}$ hour, it gave a strong electroscopic reaction. The result was the same on a number of consecutive evenings.

Rubber gloves, paper, cotton, cellulose and other organic substances took up an energy from the cultures which gave a reaction at the electroscope. High humidity, ventilation in the shade and touching the substances with the hands for several minutes eliminated the effect.

A first point of departure for the qualitative comprehension of the radiation had been won. The fact that the cultures charged the rubber and other organic substances could not be doubted; I could charge them at any time by bringing them in contact with the cultures and discharge them by ventilating them or putting them in water.

The situation became more complicated when I obtained *new* rubber gloves and found that they, too, gave a reaction at the electroscope, though they had been neither rubbed nor brought into contact with the cultures. That meant that the energy was present not only in the cultures, but "elsewhere" too. This finding disturbed the unequivocal nature of the culture reaction, but seemed important. Again I had the inevitable impression: the radiation is present everywhere.

Here, the statement of one of the experimental subjects, "I feel as if I had been looking into the sun for a long time," came to my aid. *Apparently, the radiation had to do with sun energy. If it was present everywhere, it had to come from the sun.* This suggested the experiment of ex-

posing uncharged rubber gloves to bright sunlight. After 5 to 15 minutes, it regularly gave a strong reaction at the electroscope. Now, I had double proof of the solar origin of the energy: first, the consideration that the experiment of heating sand to incandescence had liberated solar energy from the sand; second, the direct charging of insulators by the radiation of the sun. Long-continued irradiation of insulators with ultraviolet light had the same effect.

Further consideration said that if the radiation in question was emitted by bions and by the sun, then it was also present in the living organism. I put uncharged rubber gloves on the abdominal skin of a vegetatively very mobile patient. The result was positive: after 5 to 15 minutes' contact with the abdominal skin, the rubber gave a strong reaction at the electroscope. I repeated the experiment with a number of students and patients. The result was positive every time. In vegetatively sluggish persons and people with poor expiration the reaction was weaker. Increased respiration made it stronger.¹

Now, several previously obscure facts became understandable. Obviously, I was dealing with an unknown energy with a specific biological activity. This energy originated from matter which was heated to incandescence and made to swell; it came about probably through disintegration of matter (as in the case of the radiating bions). It was, furthermore, radiated into the atmosphere by the sun; consequently, it was "present everywhere." This solved the seeming contradiction that the rubber was not only charged by the SAPA bions, but that rubber which had not been exposed to the cultures also gave a reaction at the electroscope.

The newly discovered energy is present also in the living organism. *The living*

organism takes it up from the atmosphere and directly from the sun.

It was the same energy with which my blue bions—no matter what their origin—killed bacteria and cancer cells; only here the energy was contained within the small blue energy vesicles.

The energy was called "*orgone*." This term indicates the history of its discovery, namely, through the orgasm formula, as well as its biological effect (of charging organic substances).

Now I also understood the blue-gray vapors which I had seen in the dark around my head, hands and shirt sleeves: *organic substances absorb the orgone energy and retain it.*

The electroscope of the Oslo physicist had not reacted to the cultures because the electroscope can be activated *only indirectly, via insulators* which have been charged with orgone energy.

THE VISUALIZATION OF THE ATMOSPHERIC ORGONE

In order to study the radiation of the SAPA bions, a closed space had to be constructed which would close in the radiation and prevent it from rapid diffusion into the surroundings. No organic material could be used for this purpose, since, as we have seen, organic material absorbs the radiation. According to my observations, metal, on the other hand, would reflect the radiation and confine it within the enclosed space. However, the metal would reflect the radiation to the *outside*. In order to avoid this, the apparatus had to have *metal walls on the inside, and walls of organic material on the outside*. With this construction, it was to be expected that the radiation from the cultures would be reflected by the inner metal walls, while the outer layer of organic material (cotton or wood) would prevent or at least reduce the reflection to the outside. The front wall of the appa-

¹ Cf. "Drei Versuche am Statischen Elektroskop." Klin. und experim. Berichte, Nr. 7, 1939.

ratus was to have an opening with a lens through which the radiation could be observed from the outside.

The apparatus was built and about a dozen culture dishes were put into it. As a magnifying glass I used a film viewer with a cellulose disk; I assumed that the rays would hit this disk and become visible on it. The experiment was successful. It was possible to observe distinctly bluish moving vapors and light, yellowish points and lines. Several experimental subjects confirmed the observations. The result seemed to be unequivocal. But then a completely incomprehensible fact turned up. It was to be expected that the boxlike apparatus after being ventilated and not containing any cultures, would not show any light phenomena. If that were not so, I could not contend that the radiation came *from the cultures*. I did not have the slightest doubt that a control experiment would confirm this expectation.

However, to my greatest surprise, I found exactly the same light phenomena in the empty box, that is, in the absence of cultures. I assumed that the organic part of the enclosure had absorbed radiating energy from the cultures, and that it was this absorbed energy which showed in the control experiment. I took the box apart, dipped the metal plates into water, put in new cotton, ventilated for several days and tried again. My efforts were in vain. *It was impossible to remove the radiation phenomena from the empty box.* Whence came the rays in the box which did not contain any cultures? True, the light phenomena were not as intense as when the box contained cultures, but they were undoubtedly present.

I had another box built, with a glass wall in front, and without organic material. This box I kept carefully away from rooms in which SAPA cultures were kept. Since this box did not have a wall of organic material, the problem of energy absorbed by such material was eliminated.

It did no good. The radiation was still there. After a good deal of understandable puzzlement, I remembered that, after all, something similar had happened with the rubber gloves and the electroscope. Rubber, influenced by the cultures, had deflected the electroscope; water and moving air in the shadow had eliminated the phenomenon; renewed proximity of the rubber with the cultures had always produced it again promptly. But, rubber gloves which had never been near the cultures, and which had not been rubbed, had also produced the phenomenon. From these observations, I had to conclude that the energy which the cultures emitted must be present everywhere. Now, I had to draw the same conclusion from the fact that the box, without containing any cultures, still continued to show the radiation. *Where did it come from?*

Today, at a time when the orgone energy has become measurable and is in practical use with cancer patients, my earlier puzzlement seems unintelligent. After all, I had had the feeling from the beginning that the radiation was present everywhere. Too, the experiment of charging gloves on the human skin should have prepared me for the existence of radiation in the box even in the absence of cultures.

Being clever afterwards is easy. During the first two years, however, I doubted every one of my observations. Such impressions as "the radiation is present everywhere" or such observations as "spontaneously charged gloves" carried little conviction; on the contrary, they were apt to raise serious doubts. In addition, the continuous doubts, objections and negative findings on the part of physicists and bacteriologists tended to make me take my observations less seriously than they deserved to be taken. My self-confidence at that time—it was just at the end of the infamous Norwegian press campaign that I discovered the radiation—was not particularly strong. Not strong enough to

withstand the impact of all the new insights which followed from the discovery of the radiation. So many things began to totter which hitherto had been unshakable biological and bacteriological convictions: the theory of the air germs; the concept of "body-electricity," the concept that protoplasm was nothing but highly complicated protein, the mechanistic as well as the vitalistic concept of life, etc., etc. Nothing but the logical development of my experiments made me stick.

At a time when the most astounding phenomena have become part of everyday work it is interesting and useful to look back on such uncertainties. It gives one the courage which it takes to go on in spite of disturbing control experiments; not to kill new findings with superficial controls; *to check up oneself on negative control findings*; and, finally, not to give in to the temptation of taking it easy and of saying, "Oh well, it was just an illusion." The existence of the radiation was beyond doubt. I could not expect to be able to explain all the diverse phenomena at once. Even less could I allow myself to avoid the doubts and emotional upheavals which result from such confusing findings.

The explanation that the radiation in the absence of cultures corresponded to the reaction at the electroscope of rubber which had never been near the cultures was, of course, unsatisfactory. There was a void which I was as yet unable to fill.

For several weeks, I kept observing the radiation in the empty box. It remained the same as I had seen it from the first, rain or shine, fog or clear weather, with high relative humidity as well as low, at night as well as during the day. That meant that the radiation could not be the immediate result of the radiation of the sun as was the charge of the rubber exposed to the sun. The radiation came "from everywhere"; it was only impossible to say what this "everywhere" was.

In the summer of 1940 I took a vaca-

tion and went to Maine. One night, still under the pressure of this unsolved riddle, I watched the sky above the lake. The moon was low on the Western horizon; on the Eastern sky there were strongly flickering stars. I was struck by the fact that the stars in the West flickered far less than those near the Eastern horizon. If the theory that the flickering of the stars is due to diffused light were correct, then the flickering would have to be the same everywhere or even more intense near the moonlight. But exactly the opposite was the case.

I began to look at individual stars through a wooden tube. Accidentally, I focused the tube on a dark blue spot in the sky between the stars. To my surprise, I saw a vivid flickering and then flashes of fine rays of light. The more I turned the tube in the direction of the moon the less intense were these phenomena. They were most pronounced in the darkest spots of the sky, *between* the stars. It was the same flickering and flashing which I had observed so many times in my box. A magnifying glass used as an eye-piece in the tube magnified the rays. All of a sudden my box lost all its mysteriousness. The phenomenon had found a simple explanation: *The radiation in the box, in the absence of cultures, came from the atmosphere. The atmosphere contains an energy of which I had never heard.* It could not be identical with the "cosmic rays." Nobody had as yet seen the cosmic rays with the naked eye. The physicists contend that the "cosmic rays" reach the earth from far spaces of the universe, that, in other words, they do not originate on our planet itself. True, in recent times, objections to this concept have been voiced. If what the physicists call cosmic rays should prove to be of planetary origin, they would be identical with the orgone radiation. What the physicists call the great power of pene-

tration of the cosmic rays would be simply explained by the fact that the orgone energy is present everywhere.¹

I trained the tube on earth and rock and found the same phenomenon, stronger in one place, less pronounced in another. The clouds showed it also, only more intense. I realized that in the course of my control experiments on the SAPA radiation I had discovered the *atmospheric orgone energy*.

I shall attempt to give a systematic description of the orgone energy in such a manner that everyone can repeat its discovery without having to follow the complicated path over which I was led by my bion experiments. This re-discovery of the orgone will demonstrate many characteristics which are unknown in any other form of energy. Only after a presentation of these findings will we understand the logic which links the "blue bion" and its energy function with the atmospheric energy. Doubtless, the atmospheric orgone could have been discovered without the SAPA bions. But the complicated detour over the bion radiation reveals an insight of far-reaching importance: *The energy*

which governs the living is of necessity identical with the atmospheric energy; otherwise, it would not have led to the discovery of the atmospheric orgone.

IV. THE OBJECTIVE DEMONSTRATION OF THE ORGONE RADIATION.

I. "SUBJECTIVE IMPRESSIONS OF LIGHT"?

As children, we used to be fascinated by the light phenomena one can observe with one's eyes closed: small bluish dots would move to and fro in front of our closed eyes. They seemed to come from nowhere and would change their course with every movement of the eyeball; they would move slowly in gentle curves and rhythmically circling movements, somewhat like this:



It would be fun to change the form and course of the dots, e.g., by rubbing the eyes. In this manner, even the color of the dots could be varied: the blue would turn into red, green or yellow. Another part of the game was suddenly to open the eyes, look at a lamp, close the eyes again and watch the after-images. In our imagination, the various forms turned into rainbows, balloons, animal heads or human figures.

As we grew up and studied physics, mathematics and biology, such "games" lost their interest. We had to learn that these subjective visual phenomena were "unreal" and something which had to be distinguished from the objective measurable manifestations of light and its seven colors. These objectively measurable phenomena, in the course of time, drowned out the strong sensations originating in our own organs. These we no longer took seriously. The workaday world required full concentration on concrete tasks; in

¹ Rudolf W. Ladenburg, in "The Nature of Cosmic Rays and the Constitution of Matter," Scientific Monthly, May 1942, states: "... The origin of the primaries of the cosmic rays is still a great puzzle. *We do not know the processes responsible for the production of such immensely energetic particles.* Some of them carry a million times more energy than the most energetic particles we can produce artificially. And as to the question of the constitution of matter our answer is still rather incomplete. We know that all matter consists of atoms, that the atoms consist of tiny nuclei surrounded by electrons and that the nuclei consist of protons and neutrons. *There must be strong forces acting between the protons and neutrons holding the nuclei together. But we do not know what they are. They are not of electrical nature* as we have seen, and many theories have been tried for understanding these forces. The discovery of the meson in the cosmic rays has raised some hope for reaching the goal, but this fundamental problem is still far from being solved." (Italics are mine, W. R.)

this, phantasies could be only disturbing. But the subjective light phenomena remained, and many people will ask themselves whether such definite phenomena as the light impressions one can have with one's eyes closed do not reflect a reality after all. The illusionary character of these visual impressions is not as much a matter of course as it may appear.

We learned that the visual impressions with closed eyes were "only subjective," that is, "not real." Scientific research paid no attention to the problem. The subjective impressions were relegated to the realm of "human phantasy." Human phantasy life is at variance with reality and ever changing according to subjective wishes; thus, scientific research had to be based on the objective, realistic basis of experiment. The ideal experiment makes our judgment independent of our subjective phantasies, illusions and wishes. In short, man has no confidence in his perceptive capabilities. In his investigations he rightly prefers to depend on the photographic plate, the microscope or the electroscope.

But in spite of all the progress brought about by our turning from subjective experience to objective observation, it also made us lose an essential quality of research. True, what we observe objectively is existing—but it is unalive, dead. In the interest of scientific objectivity, we have learned to kill the living even before we proceed to make any statements about it. Thus we build, of necessity, a mechanical machine-like picture of the living, a picture in which is lacking the most essential quality, the specific aliveness. The aliveness reminds us too much of the intense subjective sensations of our childhood. These subjective vegetative sensations are at the basis of every kind of mysticism, be it Yoga, or the Fascist "surging of the blood," or the reaction of a spiritist medium, or the ecstasies of a dervish. Mysticism asserts the existence of certain forces

and processes which natural science denies or looks at with contempt.

Simple consideration says: *Man cannot feel or phantasy anything which does not actually exist in one form or another. For human perceptions are nothing but a function of objective natural processes within the organism.* Could there not be a reality behind our "subjective" visual impressions after all? Could it be possible that in these subjective impressions we perceive the biological energy within our own organism? Let us see whether this idea is as strange as it seems.

To do away with the subjective visual impression by calling it "phantasy" is erroneous. This "phantasy" takes place in an organism which is governed by certain natural laws; therefore, it must be *real*. We are only just emerging from a period in which medicine called all functional and nervous complaints "unreal" or "imaginary," because they were not understood. But a headache is a headache, and a visual impression is a visual impression, whether we understand it or not.

Of course we will reject the mystical assertions which are based on the *misinterpretation* of vegetative sensations. But that does not justify denying the existence of these sensations. We also have to reject a mechanistic natural science because it divorces the vegetative sensations from the natural processes taking place in the organs. *Self-perception is an essential part of the natural life-process.* It is not nerves here, muscles there and vegetative sensations in a third place; rather, the processes taking place in the tissues form an indivisible *functional unity* with their perception. This is, indeed, one of the essential guiding lines in our therapeutic work. Pleasure and anxiety represent a certain state of functioning of the total organism. We have to distinguish clearly between functional thinking and mechanistic thinking which cuts things apart and will never grasp living functioning. Let us put down

four important principles of a *functional* concept of nature:

1. Every living organism is a functional unit; it is not merely a mechanical sum total of organs. The basic biological function governs every individual organ as it governs the total organism.

2. Every living organism is a part of surrounding nature and functionally identical with it.

3. Every perception is based on the consonance of a function within the organism with a function in the outer world; that is, it is based on vegetative harmony.

4. Every form of self-perception is the immediate expression of objective processes in the organism (psychophysical identity).

Nothing is to be expected of the philosophical speculations concerning the reality of our sensations as long as the principle is not recognized that the perceiving *subject* and the observed and perceived *object* form a *functional unity*. Mechanistic science splits up this unity into a *duality*. The mechanistic empiricism of science of today is hopeless, for it excludes sensation completely.

Every important discovery originates from the subjective experiencing of an objective fact, that is, from vegetative harmony. It is only a matter of making the subjective sensation objective, of separating it from the stimulus and of comprehending the source of the stimulus. This is something which we, in our vegetotherapeutic work with the patient, do many times every hour in the process of comprehending the bodily expression of the patient. In this process, we identify ourselves with the patient and his functions. After we have comprehended them vegetatively we let our intellect work and thus make the phenomenon an objective one.

After this discourse on vegetative harmony, let us return to our infantile phantasies and visual impressions. How can we decide *objectively* whether or not our

visual impressions with closed eyes correspond to objective processes?

2. THE FLICKERING IN THE SKY MADE OBJECTIVE. THE ORGONOSCOPE

To begin with, let us try to find out whether similar phenomena can be observed with open eyes and in daylight. If we take plenty of time and observe carefully, we find that this is the case. If we look at a wall or a white door we see a *flickering*. It is as if shadows or fogs were moving more or less rapidly and rhythmically. We resist the temptation of doing away with this observation by calling it "merely a subjective impression" and make up our minds not to give up until we have found out *objectively* whether this flickering is taking place in our eyes or outside of our organism.

To begin with, it is not easy to think of a method of differentiating. We close our eyes. The flickering disappears but is replaced by the movements of forms and color. If we repeat the closing and opening of the eyes, we finally realize that the phenomena are *different* when we have our eyes open from when we have them closed.

We look at the blue sky, looking "as if in the far distance." At first, we see nothing. But if we continue to look carefully, we find to our amazement that the sky shows quite clearly a rhythmical, wave-like flickering. *Is this flickering merely in our eyes, or is it in the sky?* If we follow the phenomenon on different days, under varying weather conditions and at different hours of the day, we find that the kind and intensity of the flickering varies a great deal. In order not to be disturbed by the diffuse light which strikes our eyes from all sides, we repeat our observation at night. The flickering is *more distinct*. It is as if waves ran across the sky. Occasionally, we see a lightning-like dot or line. The flickering can also be seen on dark

clouds. If we continue the observation of the sky over a period of weeks, we notice variations in the flickering. On some nights it is only slight, on other nights very intense. The astronomers ascribe the flickering to "diffuse light." We used to accept this explanation as thoughtlessly as many others. But now we must ask ourselves whether the flickering of the stars could not have something to do with the flickering in the sky *between* the stars. Should this be the case, we would have the first indication of the objective existence of a moving unknown something in the atmosphere. Certainly, the flickering of the stars is not a subjective optical phenomenon. The astronomers build their observatories on great heights in order to exclude the flickering of the stars. If it were due to "diffuse light," it would be constant all the time. The variation in intensity cannot be explained on the basis of "diffuse light." The unknown something which makes the stars flicker must be moving close to the surface of the earth. It cannot be diffuse light. Such "explanations" only serve to hide the facts. Let us postpone the answer to the problem.

In these observations of the sky, it becomes necessary to delineate a small field of observation. We look at the sky through a metal tube about 2 to 3 feet long and 1 inch in diameter. Through it, we see a circle which appears *lighter* than the surrounding sky. If we keep *both eyes open* and look through the tube with one eye, we see the dark blue night sky and in it a disk of a lighter blue. *Within the disk, we see a flickering and then rapidly appearing and disappearing dots and lines of light.* Close to the moon, these phenomena are less pronounced; it is all the more distinct the darker the general atmospheric background.

Are we again the victim of an illusion? In order to decide this question, we insert an eye-piece with a magnification of about

5x into the tube. Now, the light disk appears larger, the dots and lines are larger and more distinct. *Since we cannot magnify subjective optical impressions, the phenomenon must be objective.* We have now delineated a field of observation and are able to observe the phenomenon under conditions which exclude the objection that it is a matter of diffuse light. In addition, the light disk appears within a black field formed by the dull inside of the tube. The inside walls of the tube show no flickering; it is strictly limited to the light disk; thus, no "subjective" sensation. Without intending to, we have constructed a primitive "*orgonoscope*." We can improve on it in the following manner:



Diagram: Orgonoscope

C: cellulose disk, outside surface dull

W.m.: wire mesh, on both sides of disk

M: metal cylinder, about 4" long, 2" wide

L: biconvex lens, about 5x, focused on disk

T: telescopic tube, 1 to 2 feet long, about 2" wide

E.p.: eye-piece, 5-10x, for additional magnification

We put our tube in front of the mirror of a good microscope with apochromatic lenses, using a 10x object lens and 5x eye-piece. Our eyes have to be adapted to the dark for about half an hour. The microscope shows the light phenomena in the sky very clearly. Every single lightning-like dot is clearly discernible. If we take

the eye-piece out of the tube, the flickering is seen on a smaller scale, but stronger; we no longer can distinguish individual dots.

Are the phenomena perhaps to be ascribed to the haze in the atmosphere? If we observe during a foggy or hazy night we find that the phenomena are absent or hardly perceptible. In other words, fog or haze does not produce flickering. *The motion of the light in the field of the microscope or the tube has nothing to do with moving fog.*

On detailed observation, we find that the light phenomena are present all over the sky; they only decrease close to stars or the moon because of the stronger light. They are most intense during clear nights and with a low relative humidity. If the humidity of the air exceeds 50%, the phenomena decrease in intensity. That is, *humidity absorbs the radiation in the atmosphere*, just as it absorbs the SAPA radiation.

We train our tube at night on various parts of the ground, the sidewalk, loose soil, the lawn, a wall, etc. We see the same movements of light particles. They are more intense on the soil than on the pavement. We look at shrubs at a distance of about a foot, moving the tube sideways toward the shrub and away from it. There can be no doubt that the phenomena are more intense at the leaves than in the surroundings. They seem to emanate from the leaves themselves. We observe flowers. The radiation is more intense at the blossom than at the stalk.

Soil, walls, shrubs, grass, animals, the atmosphere, etc., show the same phenomena, only in different intensities. The conclusion from these findings is inevitable: *The radiation phenomena are present everywhere. The radiating energy varies in density and intensity.* We may have wished to find it in one place and not in the other. Then the whole thing would have been a minor and harmless

discovery. But we have to follow the facts, no matter how weird they begin to look to us.

3. THE CONSTRUCTION OF A RADIATING ENCLOSURE. OBJECTIVE VISIBILITY

The fact that the orgone radiation is present *everywhere* presents a difficulty in experiment. In order to properly describe a phenomenon, we must isolate it and comprehend it by *comparing* it with something different. We have to construct an enclosed space in which we can separate the energy.

We try to see whether we can find out anything new in a completely darkened room. We adapt our eyes to the darkness for about half an hour. During this time, all subjective light impressions disappear. We see nothing but black, that is, nothing. We look through the tube; we see nothing. In other words, we only confirm the common experience that in an absolute darkroom there is absolute blackness. The radiation disappeared, and we are inclined to give up the "crazy idea." But to follow this inclination would mean not doing research. We cannot simply disregard the fact that on the outside we had established the existence of this peculiar manifestation beyond any doubt. It cannot have simply disappeared. But being convinced of something is one thing; *proving* it is another.

Since we do not know the properties of our atmospheric radiation we have to work with apparatuses such as are used in working with known energies. We might use a "Faraday cage," i.e., a room the walls of which are formed of copper wire mesh. Such a room is free of electromagnetic fields because all electromagnetic waves coming from the outside are caught by the wire net and are grounded. We observe the same principle when we cross a bridge with a metal superstructure in our car; the radio stops work-

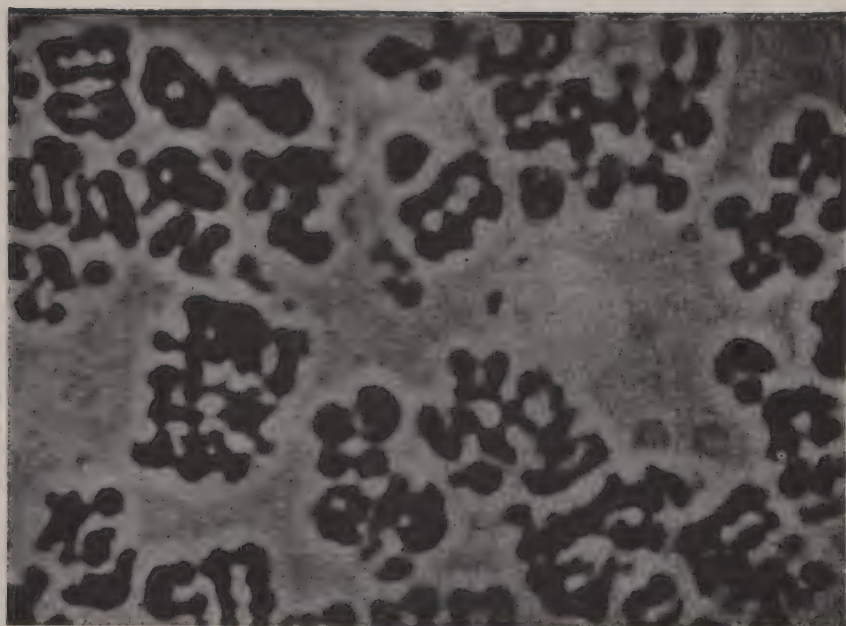


FIG. 1. Culture of PA bions. Approximately 3000x.



FIGS. 2 and 3. Cultures of SAPA bions in which the orgone radiation was discovered.

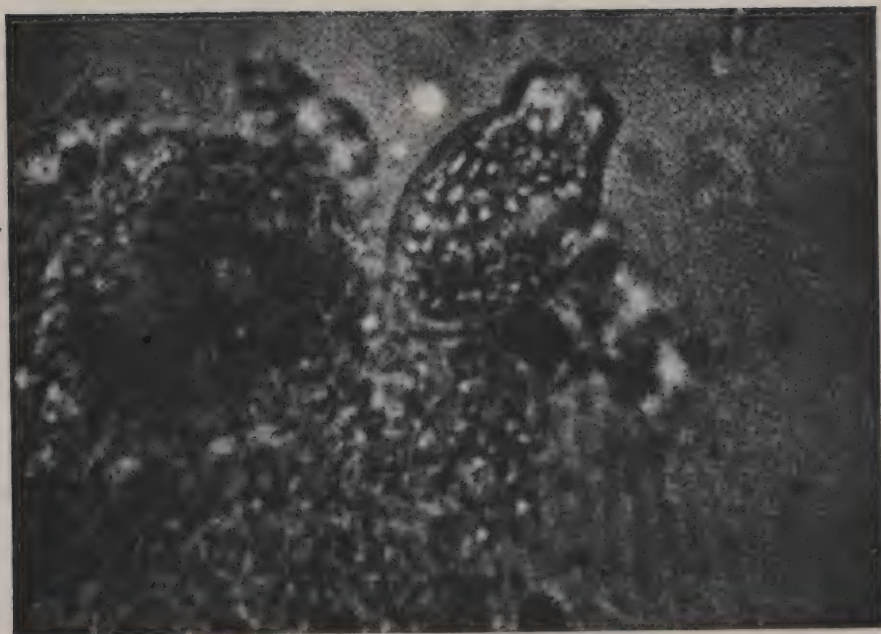


FIG. 4. Heap of bion vesicles in an advanced stage of organization.



FIG. 5. A phase in the development of a protozoon from moss.



FIG. 6. T-bacilli from sarcoma. Approximately 5000x.

ing. In this cage, delicate oscillographic experiments can be carried out without interference.

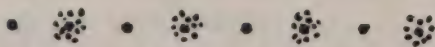
We build such a cage, say, in a corner of the basement. In order to reduce the connection between inner and outer air to a minimum, we build an inside wall of sheet iron, leaving only a few cracks to admit sufficient air for breathing. We sit in the completely dark cage and adapt our eyes.

In the course of about half an hour the complete darkness gives way to a vague shimmer. Our eyes are irritated by peculiar light phenomena. It is as if vapors of a gray-blue color were slowly moving through the room. When we fix our eyes on a certain spot on the wall, we see moving light particles. The longer we stay in the room the more distinct the light phenomena. Within the gray-blue vapors we can distinguish light dots of a deep *blue-violet* color. They are reminiscent of the well-known subjective visual phenomena previous to falling asleep. We begin again to wonder whether the phenomena are inside or outside of our eyes. When we close our eyes, the blue-violet dots do not disappear. Are our optic nerves irritated, or are the light phenomena *not real*? One would expect them to disappear with the closing of the eyes and to reappear with opening them. On the other hand, there are subjective after-images. It is all not so simple. We must ask ourselves: how is it possible for our optic nerves to become irritated in complete darkness, and why can we not get rid of the phenomena in our eyes?

Many experimental subjects develop a conjunctivitis after an hour or more in the Faraday cage. Since, normally, the eyes rest in complete darkness, there must be something in the cage which excites the optic nerve and irritates the conjunctiva.

We repeat our observations in the dark cage, trying to find ways and means of answering some of the questions that arise.

For example: Can the bluish-gray and violet light manifestations be magnified with a magnifying glass? We find this to be the case. As they become more distinct, we observe that the light dots appear in two forms: they either fly in our direction or past us. In the first case, there is a succession of the following impressions:



Every light dot seems to become alternately larger and smaller, as if it were pulsating. If the light dot flies past us, we have a trajectory something like this:



We may call this trajectory, according to its shape, a spinning wave (*Kreiselwelle*). Its significance will have to be discussed later on. The violet light dots seem to come from the metal walls in *rhythmic* sequence.

After a considerable time—2 to 3 hours—in the cage, we find a bluish-gray shimmer around our white coat and are able to see the contours of another person, even though only vaguely. Let us not be led astray by the “mystical” and “spooky” impression of this phenomenon. There is nothing mystical about it. The radiation seems to adhere to substance, such as cloth and hair. We put some good fluorescent material, such as zinc sulfide, on a swab of cotton and fasten this to the wall. Our observation had been correct. The region of the cotton swab appears lighter than its surroundings. The magnifying glass makes the radiation more distinct; we see flickering and fine rays.

Another observation: A paper disk with a layer of zinc sulfide had been lying in the cage for several days. When we bend it, it emits a strong radiation. For a control, we expose another such disk to fresh

air, or we continue the bending for a considerable period of time. In either case, the light phenomena disappear. We leave one of the disks again in the cage for several days. On bending, the light phenomena are again present. That means, that *the paper disk has absorbed orgone*.

We now try to make the orgone in the cage *visible from the outside*. For this purpose, we cut a window about 5 inches square in the front wall of the cage. On the metal inside, we put a fluorescing glass plate across the opening, such as is used, e.g., to make Xrays visible.¹

In the opening of the exterior wooden wall we put a tube containing a biconvex lens of a magnification of 5 to 10x. The tube with the lens is removable so that the fluorescing disk can be observed both with and without magnification.

Inside the cage, we mount a green bulb such as is used in developing highly sensitive photographic plates. This bulb gives a steady dim light as a background for the orgone radiation. In this arrangement, we follow a hint given by nature: the orgone radiation is clearly visible against the dimly lighted night sky.

In order to reproduce the flickering of the stars, we drill a few holes of about $\frac{1}{8}$ " in the wall. Now, we observe the cage from the outside in complete darkness.

The light which we perceive through the holes is not steady, but *flickers strongly*; it is not green, but *bluish*.

On the fluorescing disk, strong motion can be observed. There is rapid flickering,

and individual lightning-like dots and lines. As time goes on, we can distinguish vapors of a deep violet color which seem to emanate from the openings. The square where the radiation is visible is sharply defined against the black surroundings. The flickering is visible only within the square. The magnifying glass makes it possible to distinguish individual rays. On clear, dry days the phenomena are more intense and distinct than on humid or rainy days. The observation of the radiation within the Faraday cage is greatly improved through the use of the orgonoscope.

How does the energy get inside the cage? After all, the wire mesh is supposed to *ground* all electromagnetic energy. The inside of the cage should be free of any charges; if it were not, one could not carry out delicate electrical experiments in it without interference by electromagnetic forces. We find ourselves confronted by another problem:

Can the energy in the cage possibly be electricity? We have a double task before us:

1. To comprehend the characteristics of the radiating energy "orgone," now made visible.
2. To investigate the connection between orgone and electricity.

The subject of the succeeding article will be the phenomenon of *lumination* (*Erstrahlung*) of fluorescing gas tubes in the orgone box. Anybody who wishes to follow the succeeding presentations, however, should first convince himself of the visibility of the orgone in its *natural* condition, in the sky, the atmosphere, the soil and the living organism.

Concluded August 1941

¹ Fluorescence, as distinct from luminescence, means light from substances which are influenced by invisible energy particles. In the case of luminescence, the light continues for longer or shorter periods of time even after the substance has been removed from the effective rays. Zinc sulfide is a fluorescent substance, calcium sulfide a luminescent substance.

THE CARCINOMATOUS SHRINKING BIOPATHY†

By WILHELM REICH, M.D.

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I. THE BIOPATHIES.

The cancer tumor is no more than a symptom of the cancer disease. Therefore, local treatment of the tumor—be it operation or irradiation with radium or X-ray—affects not the cancer disease as such, but only one of its visible symptoms. Similarly, death from cancer is not due to the presence of one or more tumors. Rather, it is the ultimate expression of the systemic biological disease “cancer” which is based on a disintegrative process in the total organism. Medical literature contains no data concerning the nature of this systemic biological disease. “Cancer disposition” means nothing but the fact that back of the cancer tumor there are at work hitherto unknown processes of a fatal nature. Cancer cachexia, the typical final phase of cancer, must be considered nothing but the ultimate visible phase of this general, as yet unknown process called “cancer.”

The term “cancer disposition” is misleading and meaningless. The term *cancer biopathy*, on the other hand, has a definite meaning. This series of articles will demonstrate the process which is the basis of cancer biopathy.

Under the term *biopathies* we subsume

all those disease processes which take place in the autonomic apparatus. There is a typical basic disturbance of the autonomic apparatus which—once it has started—may express itself in a variety of symptomatic disease pictures. This basic disturbance, the biopathy, may result in a cancer (cancer biopathy) but equally well in an angina pectoris, an asthma, a cardiovascular hypertension, an epilepsy, a catatonic or paranoid schizophrenia, an anxiety neurosis, a multiple sclerosis, a chorea, chronic alcoholism, etc. What determines the development of a biopathy into this or that syndrome, we do not as yet know. What interests us here primarily is that which all of these diseases have *in common: a disturbance of the biological function of pulsation in the total organism.*

A fracture, an abscess, a pneumonia, yellow fever, rheumatic pericarditis, acute alcohol intoxication, infectious peritonitis, syphilis, etc., are *not* biopathies. They are not due to a disturbance of the autonomic pulsation of the total vital apparatus; they are circumscribed, and, if they result in a disturbance of the biological pulsation, they do so only secondarily. We shall speak of biopathies only where the disease process *begins* with a disturbance of the biological pulsation, no matter what secondary disease picture it results in. Thus,

† Translated by the Editor.

we can distinguish a "schizophrenic biopathy" from a "cardiovascular biopathy," an "epileptic biopathy" or a "cancer biopathy," etc.

This addition to medical terminology is justified by the fact that we cannot comprehend any of the diverse diseases of the autonomic apparatus unless,

1) we distinguish them from the typical infectious diseases and traumatic surgical diseases;

2) we look for and find their common mechanism, the disturbance of biological pulsation;

3) learn to understand their differentiation into the various disease pictures.

The cancer disease lends itself particularly well to a study of the basic mechanisms of biopathy. In it, we find a great number of disturbances that everyday medical practice has to deal with. It shows pathological cell growth; one of its essential manifestations is bacterial intoxication and putrefaction; it is based on chemical as well as bio-electric disturbances in the organism; it has to do with emotional and sexual disturbances; it results in a number of secondary processes—such as anemia—which otherwise form disease entities by themselves; it is a disease in which civilized living plays a decisive role; it is of concern to the dietitian as well as to the endocrinologist or virus researcher.

The confusing variety of manifestations presented by the cancer disease only hides a common *basic disturbance*. The same is true, as we know, of the neuroses and functional psychoses which—in all their variety of form—have one common denominator: *sexual stasis*.

Sexual stasis represents a fundamental disturbance of biological pulsation. Sexual excitation, as we know, is a primal function of the living plasma system. *The sexual function has been shown to be the productive life function per se*. Thus, a *chronic disturbance of the sexual function*

must of necessity be synonymous with a biopathy.

The stasis of biosexual excitation may manifest itself, basically, in two ways. It may appear as an emotional disturbance of the psychic apparatus, that is, as a neurosis or psychosis. But it also may manifest itself *directly* in a malfunctioning of the organs and express itself as organic disease. As far as we know, it cannot produce actual infectious disease.

The central mechanism of biopathy is a disturbance in the discharge of biosexual excitation. This statement calls for the most detailed substantiation. It is not surprising to find that in the biopathy physical and chemical factors are at work as well as emotional factors. The biosexual emotion demonstrates the psychosomatic unity of the total biological system more forcibly than anything else. Thus it is to be expected that disturbances in the discharge of biosexual energy—no matter what their point of manifestation—will result in disturbances of biological functioning, in other words, in a biopathy.

BIOPATHIC SHRINKING

Living functioning in man is basically no different from that in the ameba.¹ Its basic criterion is *biological pulsation*, that is, alternating complete *contraction* and *expansion*. In unicellular organisms, it is readily observed in the form of the rhythmical contraction of the vacuoles or the contractions and serpentine movements of the plasma. In the metazoa it is most readily seen in the cardiovascular system; the pulse beat represents the pulsation unequivocally. In the various organs, it takes a different form, according to their structure. In the intestines, it shows itself as a wave of alternating contraction and expansion, as "peristalsis." In the urinary bladder, the biological pulsation functions

¹ Cf. W. Reich, "Der Urgegensatz des vegetativen Lebens," 1934.

in response to the mechanical stimulus exerted by the filling of the bladder with urine. It functions in the striped muscles as contraction, in the smooth muscles as a wave-like peristalsis. In the orgasm, the pulsation takes hold of the total organism in the form of the orgasm reflex.

Neither the pulsatory movements of the organs nor their disturbances such as shock, blocking, shrinking, etc., are compatible with the generally accepted notion that the nerves only transmit impulses while they themselves are rigid and immobile. *The autonomic movements are comprehensible only under the assumption that the autonomic nervous system itself is mobile.* The decisive question as to whether this is a fact can be answered by direct observation. We put small, sufficiently transparent worms under the microscope in such a manner that not only the ganglion but the ganglia *fibers* are in focus. As the worm is in constant motion, one has to learn to keep an autonomic fiber constantly in focus. Thus one can convince oneself that *the autonomic system does indeed expand and contract* and is not rigid. The movements of the nerves are serpentine, slow, wave-like, sometimes jerky. They always precede the corresponding movements of the total organism by a fraction of a second: first, the nerve, and its ramifications, contracts, and then the contraction of the musculature follows. The same is true of the expansion. As the worm dies, the nervous system gradually shrinks; with that, the organism bends. The process of gradual shrinking is occasionally interrupted by a contraction. After a shorter or longer period of complete immobility, the rigid contraction ("rigor mortis") subsides, the organism relaxes together with the nerves, and motion does not reappear.

Biopathic shrinking begins with a chronic preponderance of contraction and inhibition of expansion in the autonomic system. This is most clearly manifested in

the respiratory disturbance of neurotics and psychotics: the pulsation (alternating expansion and contraction) of lungs and thorax is restricted; the inspiratory attitude predominates. Understandably enough, the general contraction ("sympatheticotonia") does not remain restricted to individual organs. It extends to whole organ systems, their tissues, the blood system, the endocrine system as well as the character structure. Depending on the region, it expresses itself in different ways: in the cardiovascular system as high blood pressure and tachycardia, in the blood system as shrinking of the erythrocytes (formation of T-bodies, poikilocytosis, anemia), in the emotional realm as rigidity and character armoring, in the intestines as constipation, in the skin as pallor, in the sexual function as orgasmic impotence, etc.

At this point, the careful reader will raise an objection. He will ask how one can speak of "shrinking" if it is only a matter of a chronic contraction of the autonomic apparatus. Is there not the possibility that the contraction will subside and that the function of complete pulsation will be restored? Should one not make a distinction between "chronic contraction" of the autonomic system, on the one hand, and its "shrinking" on the other? Could not the shrinking be a *result* of the chronic contraction, a gradual and premature dying off of the vital apparatus?

The objection is correct. *The biopathic shrinking in cancer is, in fact, the result of a chronic contraction of the autonomic apparatus.*

II. VEGETOTHERAPEUTIC CONSIDERATIONS.

The connecting link between sexual function and cancer disease is formed by the following facts with which sex-economic clinical experience has made us familiar:

1. Poor external respiration which in

turn leads to a disturbance of the internal respiration in the tissues.

2. The disturbed function of bio-electrical charge and discharge of the autonomic organs, particularly the sexual organs.

3. The chronic spasms of the musculature.

4. Chronic orgasmic impotence.

Up to now, the connection between disturbances in the discharge of sexual energy and cancer has not been investigated. Experienced gynecologists are well aware of the fact that such a connection exists. Respiratory disturbances and muscular spasms are the immediate result of a fear of sexual excitation (orgasmic impotence). Organs with poor respiration, organs which are spastic and insufficiently charged, are biologically weakened; thus, they are highly susceptible to cancer-producing stimuli, whatever they may be. On the other hand, organs which function biologically normally are not affected by these same stimuli. This is a necessary and logical assumption.

These clinically well-established facts—deficient biological charge, muscular spasm and deficient external and internal respiration—give the concept of “cancer disposition” a tangible content. I shall now attempt to show how sex-economic clinical experience led to cancer research.

Sex-economic observation of character neuroses showed again and again the significance of *muscular spasms* and the resulting devitalization in the organism. Muscular spasm and deficiency in bio-electrical charge are subjectively experienced as “being dead.” Muscular hypertension due to sexual stasis regularly leads to a diminution of vegetative sensations; the extreme degree of this is the sensation of the organ “being dead.” This corresponds to a block of biological activity in the respective organ. For example, the blocking of biosexual excitation in the genital always goes with a spastic tension

of the pelvic musculature, as is regularly seen in the uterine* spasms of frigid women. Such spasms often result in menstrual disturbances, menstrual pains, polyps and fibromata. The spasm of the uterus has no other function than that of preventing the biosexual energy from making itself felt as vaginal sensation. Spasms representing inhibitions of vegetative currents are seen particularly frequently wherever we find *annular* musculature, for example, at the throat, at the entrance to and the exit from the stomach, at the anus, etc. These are also places where cancer is found with particular frequency. The disturbance in biological charge of a gland, a region of the skin or a mucous membrane is produced and maintained by a muscular spasm in the neighborhood of the affected site; the spasm prevents biological energy from charging the respective site.

In a woman whom I treated vegetotherapeutically, Xray showed a beginning cancer of the 4th costal cartilage on the right side. This was due to a chronic spastic contraction of the right pectoralis muscle. This contraction represented a strong holding back in the shoulders because of repressed beating impulses. The woman had never experienced an orgasm and suffered from compulsive flirting.

In vegetotherapy, we see not only character neuroses, but also, of course, schizophrenic, epileptic, Parkinson-like, rheumatic and cancerous disturbances. If an organic disease develops, this may take place during the course of the treatment or afterward; in the latter case, one will remember the signs that foreshadowed the disease. The most frequent finding is *spasms in the pelvic musculature in women*, resulting, in the majority of cases, in benign tumors of the genital organs.

Vegetotherapeutic clinical observations raise the question as to the fate of the somatic sexual excitation when its normal discharge is barred. We know only that the biosexual excitation can be reduced or

inhibited by chronic muscular tensions. In female patients, these tensions often show in the form of hard lumps in the uterus. The spasm of the uterus usually spreads to the anal sphincter and the vagina, and beyond that, to the adductors of the thigh. The pelvis is always retracted, the sacral spine often stiff and ankylotic. Lumbago and pathological lordosis are typical manifestations of this condition. In the pelvis, any vegetative sensation is absent. During expiration, the wave of excitation is inhibited by the pulled-up chest and the tense abdomen. The excitation of the large abdominal ganglia does not progress to the genital organs and thus a disturbance of biological functioning necessarily results. The genitals are no longer capable of biological excitation.

Many women who suffer from genital tension and vaginal anesthesia complain of a feeling that "something is not as it should be down there." They relate that during puberty they experienced the well-known signs of biosexual excitation; and that later they learned to fight these sensations by way of holding their breath. Later, so they relate in a typical manner, they began to experience in the genitals a sensation of "deadness" or "numbness," which, in turn, frightened them. As the vegetative sensations in the organs are an immediate expression of the actual biological state of the organs, such statements are of extreme importance for an evaluation of somatic processes. (The fact has to be kept in mind that patients are rarely able to comprehend or describe their organ sensations spontaneously; it takes character-analytic exploration to make them able to do so).

The generally prevailing sexual inhibition of women explains the prevalence of cancer in the breast and the genital organs. The sexual inhibition may have existed for decades before it manifests itself as cancer.

The following case illustrates in a singularly simple manner the immediate connection between character armoring, muscular spasm and the onset of a cancer tumor.

A man of 45 came to my laboratory because of a complete obstruction of the esophagus by a cancer tumor. He was unable to take solid food at all; liquid food he soon vomited. Xrays showed a shadow the size of a small fist and a complete obstruction in the middle of the esophagus. The patient was rapidly losing weight and strength; there was a severe anemia and T-bacilli intoxication. The anamnesis revealed the following facts: Several months previous to the onset of the complaints, his son had been drafted for the army. This son was the patient's favorite; he became worried and deeply depressed. (He had always had a tendency to depression.) In the course of a few days, he developed a spasm of the esophagus. He had difficulty in swallowing; this disappeared, however, when he took a drink of water. At the same time, he had a sensation of oppression in the chest. These disturbances kept coming and going for some time, until finally they became stationary. The difficulty in swallowing increased rapidly. He went to see a physician who found the constriction and a small tumor. Treatment by Xray did not help, and in the course of a few months the man got to the point of starving to death. I should like to add that he had suffered since childhood from a severe spasm of his jaw musculature; his face had a hard, rigid expression. Correspondingly, his speech was inhibited; as a result of the tension in his jaw muscles, he talked through his teeth.

The extent of the devastating results of the inhibition of the natural biological rhythm—as it is expressed in respiration and the alternation of sexual tension and gratification—can as yet not even be guessed at. Deficient external respiration must of necessity lead to a deficient internal respiration of the organs, that is, a deficient supply of oxygen and elimination of carbon dioxide.

When, some years back, I began to

comprehend the significance of the respiratory disturbance for emotional disturbances, I remembered the findings of Otto Warburg¹ concerning the metabolism in cancer tissue. Warburg found that all the various cancer-producing stimuli have one thing in common: they produce a local oxygen deficiency as a result of which there is a disturbance of respiration in the respective cells. Thus, the cancer cell is a poorly breathing cell. Warburg considers this oxygen lack in the cells one of the causes of cancer, in the following manner. In certain places, only such cells will develop as are capable of overcoming the respiratory disturbance. The cancer cells originate from such cells. It is a matter of a disturbance in the energy metabolism. The respiratory disturbance is characteristic of all known malignant tumors, including the Rous' sarcoma. *The metabolism of cancer cells, thus, has to be regarded as an anoxic condition of normally growing cells.* From this correct finding of Warburg we cannot, however, draw the conclusion that the cancer cell is nothing but a normal cell taking on a different mode of growth under the influence of oxygen lack. In reality, the cancer cell is—biologically speaking—basically different from the normal cell. It is nothing but a protozoal formation. (This will be shown in detail elsewhere.)

As stated before, these facts form the connecting link between the autonomic functions and the disease of cancer.

III. FROM THE CASE HISTORY OF A CANCER PATIENT. AN ATTEMPT AT VEGETOTHERAPY.

I shall now give the history of a cancer patient which lends itself particularly well to a demonstration of the nature of the shrinking biopathy.

The patient's brother related that her first complaint was a violent pain in the

right hip bone. The pain was constant and "pulling." At this time, her weight was about 125 lbs. Her physician diagnosed a sacro-iliac spasm. She was incapable of rising from the examination table. She was given injections of morphine and atropine, to no avail. The pain continued unabated and the patient was unable to leave her bed, where she lay flat and immobile. Three months after the onset, the patient began to vomit. At about the same time, the pain moved to the region of the fifth cervical vertebra. Xrays showed a collapsed vertebra. An orthopedic surgeon put the patient in a plaster cast. He was the first to find a collapse of the 10th dorsal vertebra, a metastasis from a cancer of the left breast. A biopsy confirmed the diagnosis of cancer. The patient was given Xray treatment of the pelvis and the spine and was sterilized by Xray. She was constantly in bed. When she left the hospital after the Xray treatment, the patient weighed 90 lbs.

The hospital case history showed the following data: Four months before admission, there were pains in the *right hip* which increased with walking and which made it difficult for the patient to sit down. The following is striking: the pains which kept the patient in bed for over two years did *not* set in originally at the place where the tumor was diagnosed. The pains were in the right hip; the primary tumor, however, was in the left breast, and several metastases were in the spine.

The patient also suffered from vomiting. The record states that she would lie flat in bed and was unable to move on account of her pains. She had no enlarged lymph glands. The tumor of the breast measured about 3 x 2 x 6 cm. Her legs showed limited motility, the sacrum was dislocated and stiff. Most of the spine was painful. The hospital diagnosis was: Carcinoma of the left breast with bone metastases. Four months after the onset of the pains, the

¹ Cf., e.g., *Biochemische Zeitschr.*, Bd. 317.

hospital physician pronounced the case hopeless.

Twenty-six months after the discovery of the breast tumor, the patient was brought to my laboratory, hardly able to walk, being supported by two relatives. The color of her skin, particularly of the face, was ashen gray. The pain in the back, sharply localized at the 12th dorsal vertebra, was violent. The left breast showed a tumor the size of a small apple, hardly movable. Blood examination: Hemoglobin 35%; T-bacilli culture in bouillon strongly positive after 24 hours. There were rot bacteria; the erythrocytes were largely in bionous disintegration and showed T-bodies; there were small nucleated round cells and numerous T-bacilli. The autoclavation test gave predominantly blue bions, but the vesicles were small and showed very little radiation. Inoculation of the bouillon culture on agar resulted in clear-cut T-bacilli growth.¹ These blood findings pointed to an extreme biological debility of the blood system. Xrays showed the following:

The fifth cervical vertebra is collapsed. No significant findings at the other cervical vertebrae.

The dorsal spine shows collapse of the tenth and twelfth vertebra and a narrowing of the joint space between the third and the fourth vertebra. There is also strong suggestion of a metastatic lesion at the medial third of the right ninth rib.

No lesions are present at the lumbar spine, but there are three round areas of lesser density at the right ilium near the sacro-iliac joint which are very suggestive of metastatic lesions, although they might be gas shadows of the cecum.

Conclusions: Multiple metastatic bone lesions.

On the basis of the Xray pictures, the physician to whom I had sent the patient for a general check-up considered the case

hopeless. I was less impressed by the Xray pictures than by the biological debility of the blood. Two physicians, friends of the family, declared that the patient would live hardly more than two weeks, while another physician, on the basis of the information from the hospital, thought it was a matter of at most two months.

THE MUSCULAR ARMOR

The vegetative habitus of the patient, when first seen, was as follows: The chin seemed immobile; the patient talked through her teeth, as if hissing. The jaw muscles were rigid, as was the superficial and deep musculature of the neck. The patient held her head somewhat pulled in and thrust forward, as if she were afraid that something would happen to her neck if she were to move her head. This vegetative attitude of head and neck seemed, at first glance, sufficiently explained by the fact that her fifth cervical vertebra was collapsed. She had been wearing a plaster collar for some time, and there was a good reason for fearing a fracture of the cervical spine with rapid or extreme movements. The patient's neurosis made the best of this situation. As was shown later, the fear of moving the neck had been present *long before* the collapse of the vertebra. More than that: this attitude of the neck was part and parcel of a *general vegetative attitude which was not a result but the cause of her cancer disease.*

The reflexes were normal. *Respiration* was severely disturbed. The lips were drawn in and the nostrils somewhat distended, as if she had to draw in air through the nose. The thorax was immobile. It did not perceptibly participate in respiration and remained constantly in an inspiratory position. When asked to breathe out deeply, the patient was unable to do so; more than that, she did not seem to understand what she was asked to do. The attempt to get the thorax into the expiratory position, that is, to push it

¹ Cf. "Bion Experiments on the Cancer Problem," 1939.

down, met with a vivid active muscular resistance. It was found that head, neck and shoulders formed a rigid unit, as if any movement in the respective joints were impossible. The patient was able to move her arms only very slowly and with great effort. The handclasp, both left and right, was very weak. The scapular muscles were extremely tense, standing out like taut cords. The muscles between the shoulder blades were sensitive to touch.

The abdominal wall was also tense and reacted to the slightest pressure with a marked resistance. The musculature of the legs seemed thin, as if atrophic, compared with the rest of the musculature. The pelvis was immobilized in a retracted position.

Superficial psychological exploration revealed the following: The patient had been suffering from insomnia for many years previous to the discovery of the cancer. She had been a widow for 12 years. Her marriage, which had lasted two years, had been unhappy. In contradistinction to the many cases of marital misery where the awareness of the unhappiness is absent, the patient had always been fully aware that her marriage was a failure. During the early months of her marriage, she had been much excited sexually and at the same time unsatisfied. Her husband had shown himself to be impotent. When, finally, the sexual act succeeded, he suffered from premature ejaculation, and the patient continued to be unsatisfied. During the first few months, her lack of sexual gratification made her suffer keenly; later, however, she "got used to it." She had always been fully aware of the necessity of sexual gratification, but had found no way of obtaining it. After the death of her husband, she devoted herself to the education of her child, refused any contact with men and withdrew from social activity. Gradually, her sexual excitation subsided. In its place, she developed anxiety states; these she combatted by way of various

phobic mechanisms. At the time when I first saw her, she no longer suffered from anxiety states; she appeared emotionally balanced and somehow reconciled to her sexual abstinence and her personal fate in general. She presented the picture of neurotic resignation with which the character-analyst is so familiar; she no longer had any impulse to change her life situation. I avoided going any deeper into the patient's latent conflict and concentrated my attention on the organic changes which soon took place.

THE RESULTS OF THE ORGONE EXPERIMENT

A detailed presentation of the technique of orgone therapy will be given elsewhere. Here, I shall mention only the essentials.

Our orgone therapy experiments with cancer patients consist in their sitting in an orgone accumulator. The orgone energy which is concentrated in the accumulator penetrates the naked body and is also taken up by way of respiration. The duration of the individual session depends on the atmospheric orgone tension which is measured electroscopically.¹ I began with sessions of 30 minutes.

During the first session the skin between the shoulderblades became red; this was a region which two months later was to play an important role in the patient's functional disease. From the second session on, the reactions in general were more distinct and intense. The pain in the region of the tenth dorsal vertebra regularly decreased *during* the treatment; this improvement usually lasted until the next session. Humid and rainy weather always intensified the pains. During the second session, the redness of the skin spread to the upper part of the back and the chest. When the patient interrupted the irradiation for a few minutes, the redness disappeared, to return as soon as she

¹ The technical details of electroscopic measurement of the orgone concentration will be dealt with in a special article.

went back into the box. Beginning with the third session, the patient felt that the air in the box was "closer and heavier." She said, "I feel as if I were filling up," "I have a buzzing around the ears from the inside," "Something clears up in my body." During the third session, she began to perspire, particularly under the arms; she related that during the past few years she had never perspired.

All these reactions of the organism to the orgone radiation are typical in all cancer patients. In one patient one reaction will predominate, in another a different one. Such phenomena as redness of the skin, lowering of the pulse rate, warm perspiration and the subjective sensations of "something in the body getting loose, filling up, swelling," etc., admit of only one interpretation: The cancer habitus is determined by a general sympathicotonia, that is, vegetative contraction. For this reason, we find in most cancer patients rapid pulse, pallor, and dryness of the skin, often with a cyanotic or livid coloration, reduced motility of the organs, constipation, and inhibition of the sweat glands. *The orgone radiation has a vagotonic effect*, that is, it counteracts the general sympathicotonic shrinking of the organism. In the accumulator, the pulse will come down from 120 to 90 or from 150 to 110 within twenty minutes; this without any medication. Similarly, there is redness of the skin, and perspiration; the peripheral blood vessels dilate and the blood pressure decreases. Expressed in terms of biological pulsation, this means that *the plasma system relinquishes the chronic attitude of contraction and begins to expand vagotonically*. This expansion is accompanied by a reduction of the typical cancer pain.

The cancer pains are usually ascribed to local mechanical tissue lesions caused by the tumor. Doubtless this explanation is correct in one or the other case when the tumor presses on a nerve or a sensitive

organ. The typical cancer pain, of which I am speaking here, however, has to be strictly distinguished from these local, mechanically caused pains. Let us call it "vegetative shrinking pain." In order to understand its nature, we have to review a few hitherto generally overlooked facts.

Sex-economy had to give up the view generally held by medicine that the autonomic nerves in metazoa only transmit impulses but are themselves rigid. Such phenomena as the "pulling" pains remain unintelligible unless one realizes that the autonomic nervous system expands and contracts, that, in other words, it is mobile. This is confirmed, as stated before, by direct microscopic observation. We can see the fibers of the autonomic ganglia expand and contract; they move independently of the movements of the total organism; their movements precede those of the total body. The impulses appear first in the movements of the autonomic nervous system and are transmitted secondarily to the mechanical locomotor organs of the organism. This fact sounds revolutionary and strange. Yet it is, really, only a simple conclusion which I had to draw from the functions of pulsation in the organism and which afterward I was able to demonstrate by direct observation. *In the metazoon, the contracting and expanding ameba continues to exist in the form of the contracting and expanding autonomic nervous system*. This autonomic system is nothing but organized contractile plasma. Thus, the emotional, vegetative, autonomic movement is the immediate expression of the plasma current. The prevalent concept of the rigidity of the autonomic nerves is incompatible with every single phenomenon of biophysical functioning, such as pleasure, anxiety, tension, relaxation, and the sensations of pressure, pulling, pain, etc. On the other hand, the contractility of the autonomic nervous system, which forms a functional and histological unity ("syncytium"), ex-

plains in a simple manner our subjective vegetative sensations. What we experience as pleasure is an expansion of our organism. The autonomic nerves, in pleasure, actually stretch out toward the world; the whole organism is in a state of vagotonic expansion. In anxiety, on the other hand, we feel a crawling-back into the self, a shrinking and tightness. What we experience here is the actual process of contraction in the autonomic nervous system.

The orgasm we experience as an involuntary expansion and contraction; this reflects the actual process of expansion and contraction in the total plasma system. The pain in cancer patients reflects the fact that the autonomic nerves retract from the diseased region and "pull" on the tissues. The expression "pulling" pain describes an actual process. It takes a mechanistically rigid, unalive, unbiological and unpsychological attitude to deny the simple and unequivocal fact that our organ sensations are identical with the actual processes in the autonomic system. Such a mechanistic concept relegates our organ sensations to the realm of metaphysics and cannot do justice to a single aspect of the cancer syndrome.

We understand now the seemingly strange phenomenon that in the orgone accumulator cancer pains regularly diminish or disappear. If the pains are not the expression of a local mechanical lesion but of a general contraction of the autonomic nerves, of a "pulling" at the tissues, then we understand that with the vagotonic expansion of the nerves the pulling, and with that the pain, subsides.

This fact reveals an essential effect of the orgone energy: *it charges living tissues and causes an expansion of the autonomic nerves (vagotonia).*

The general vitalization of biological functioning by the orgone radiation is also reflected in the blood picture.

Our patient came with a hemoglobin of 35%. Two days later it was 40%; after

four days, 51%; after a week, 55%; after two weeks, 75%, and after three weeks, 85%, that is, normal. The patient got up, took her child back to live with her and, after years of being bedridden, began to work again. She was inclined to overdo things; she went shopping, spending hours at a stretch in department stores. She was free from pain, slept well and felt entirely well. She did her housework all by herself. I had to remind the patient of the fact that she was getting over a very serious illness and had to warn her to take it easy. My warnings were justified. After about 6 weeks, the patient began to feel tired, and the hemoglobin dropped to 63%. The pains in the back did not return, but she began to complain about difficulties in breathing and about a "wandering" pain in the ribs, in the diaphragmatic region. She was prescribed bedrest, and the hemoglobin content soon improved, returning to 83% after another week. The weight remained constant at about 124 lbs. After another four weeks, the hemoglobin was still 85%.

The patient was no longer brought to me by car; she came every day by subway. Her relatives and physicians were amazed. As to the physicians, I met with a peculiar attitude which is incomprehensible from a rational point of view, an attitude which appears when, for a change, the case of a cancer patient is *not* hopeless. They did not ask how the improvement had been brought about. At the beginning, I had sent the patient to a physician who predicted that she would die within a few days. Now, the same patient was up and around and her X-ray pictures showed complete ossification in a previously cancerous spine; similarly, the shadows in the pelvic bone had disappeared after two weeks' treatment. Yet, none of the physicians showed any interest in what was going on.

These X-ray pictures showed the healing process unequivocally. They confirmed

what I had seen so often in my cancer experiments with mice: the orgone energy arrests the growth of the tumor and replaces it by a hematoma which—under favorable conditions—is eliminated by connective tissue or, if the tumor is in a bone, by calcification.

BIOLOGICAL BLOOD TESTS

I shall give here a brief résumé of what will be presented in detail elsewhere: *the orgone energy charges the red blood corpuscles.*

Every individual erythrocyte is an independent organotic energy vesicle. It follows the same pulsation and function of tension and charge as the total organism and each of its organs. With a magnification of about 3000x, expansion and contraction of the erythrocytes can easily be observed. Under the influence of adrenalin, the erythrocytes shrink, with potassium chloride they expand; that is, they follow the antithesis of pleasure and anxiety.

Our blood tests in cancer patients are done as follows:

1. *Culture test.* A blood sample is tested for bacterial growth in bouillon or in a mixture of 50% bouillon plus 50% KCl (0.1 n). The blood of advanced cancer patients regularly gives a strong growth of *T-bacilli* (cf. "Bion experiments on the Cancer Problem," 1939).

2. *Biological resistance test.* A few drops of blood in bouillon and KCl are autoclaved for half an hour at a steam pressure of 15 lbs. Healthy blood withstands the autoclavation better than the biologically devitalized blood of cancer patients. Biologically vigorous erythrocytes disintegrate into large blue bion vesicles. Devitalized erythrocytes in cancer blood disintegrate into T-bodies. *Depending on the degree of devitalization, the content in T-bodies increases and that of blue bions decreases.*

The orgone treatment charges the erythrocytes. This is shown by the fact that the T-reaction changes into a B-reaction; that is,

the blood becomes more resistant to destruction by high temperatures.

3. *Disintegration in physiological salt solution.* A small drop of blood is put on a hanging-drop slide in 0.9% NaCl solution. According to their biological resistance, the erythrocytes disintegrate slowly or rapidly. The more rapidly they disintegrate, and the more rapidly their membrane shrinks and they form bion vesicles on the inside, the lower is their biological resistance. Biologically vigorous erythrocytes can retain their shape for 20 minutes or longer. Disintegration within 1 to 3 minutes indicates extreme biological weakness. In the case of marked anemia, the erythrocytes show the typical T-bodies, i.e., shrinking of the membrane.

4. *Blue orgone margin.* When observed with apochromatic lenses at a magnification of 2-3000x, biologically vigorous erythrocytes show a wide margin of an intense blue color. Devitalized erythrocytes with a tendency to rapid disintegration show a very narrow margin with a weak blue coloration.

In our patient, the blood tests showed a general biological strengthening of the blood. When the patient first came, the blood cultures were strongly positive, that is, they showed intensive growth of *T-bacilli*. Three weeks later, the cultures were negative and remained so. The erythrocytes no longer showed shrinking and had a wide margin of deep blue. The autoclavation test resulted in 100% bionous disintegration and no longer in a T-reaction. The disintegration in salt solution now took place very slowly and without the formation of T-bodies.

The patient was free from pain and felt generally well, except that she reacted with malaise to rainy weather. She regularly came for her daily orgone treatment. The blood pressure remained constant at about 130/80. The pulse rate was and remained normal. There was only one symptom which not only failed to disappear but became more pronounced. This was a respiratory disturbance which at first was ill-defined.

THE APPEARANCE OF THE CANCER BIOPATHY

I shall proceed now to a description of the cancer biopathy which made its appearance only after the elimination of the tumors and the restoration of the normal blood picture. I did not have the faintest inkling of what I am going to describe here; I experienced it at first with utter amazement and lack of comprehension. It was difficult to understand the connection between the two series of phenomena. What happened was this: After the cure of the local cancer tumors, a general vegetative disease picture appeared which previously had been hidden and which formed the actual background of the cancer disease: the shrinking biopathy.

The patient seemed to have regained her complete physical health. This happy state of affairs lasted about six weeks and was objectively confirmed by the blood tests and the X-ray pictures. The tumors had disappeared. The blood remained healthy, the anemia did not recur. The tumor in the left breast was no longer palpable after the eighth orgone irradiation. With purely mechanistic pathological concepts, one would have proclaimed a "cure" of this cancer case. At the same time, however, certain emotional symptoms became more and more pronounced and kept one from jumping to premature conclusions.

At the time when the patient first came she had not felt any sexual desire for a long time. About four weeks after the beginning of orgone therapy I observed in her signs of sexual stasis. Up to that point, she had been gay and full of hope for the future; now, a depression began to set in and she developed signs of stasis anxiety. She began to withdraw from people again. As I learned from her, her attempts to straighten out her sexual situation had failed. She related that for some time now she had been suffering from intense sexual excitation; these excitations were much more intense than those which

she had experienced 14 years earlier, at the beginning of her marriage, and which she had fought then. To judge from her description, it was a matter of normal vaginal excitations. During the first two weeks of getting well, she had made a few attempts to establish sexual contact; failing in this, she became depressed and felt physically exhausted. These attempts, which were entirely healthy, were continued for several weeks. One day she asked me whether it would be harmful to have sexual intercourse "once a month." The question had an apprehensive ring to it and was at variance with her sexual knowledge. It pointed to an irrational fear: she began to develop *the fear that a dangerous accident would happen to her in sexual intercourse, since, as she said, "her spine was demolished in two places."* She was afraid of what might result from the violent motions connected with sexual excitation. It is to be noted that this idea did not appear until *after the failure* of her attempts to find a sexual partner. She had met a man who proved impotent. She became furious but fought back her hatred and disillusionment. When another attack of anger would come, she would "swallow her anger." Now, the patient presented the complete picture of a stasis neurosis. The depression became more severe and she suffered from uncontrollable crying spells; she felt "a dreadful pressure in her chest—it goes through and through."

One might have been tempted to explain this "pressure in the chest" on the basis of the collapsed 12th dorsal vertebra. But simple consideration contradicted this assumption. For six weeks the patient had had no pain in spite of working hard; it was inconceivable that a *mechanical* pressure of the collapsed vertebra on a nerve should now suddenly become effective after not having made itself felt for weeks. What followed showed that the patient was developing an anxiety hysteria. This neurosis made use of the spine lesion as a

rationalization. It was to be expected that from now on every psychiatrically untrained physician would ascribe all symptoms to the collapsed vertebra, overlooking the fact that this same vertebra had been no less collapsed at the time when the patient was going around without pain for a number of weeks.

After about ten orgone irradiations, the patient had begun to experience sexual excitation. The orgone energy had charged her biosexually, but she was unable to handle the sexual excitation. The anxiety neurosis which she now developed was only a reactivation of old conflicts; in puberty, she had suffered from similar states. The patient now found herself in the tragic situation of waking up to new life, only to be confronted by a nothingness. As long as she was ill, the tumor and the resulting suffering had absorbed all interest. Indeed, her organism had used up great amounts of biological energy in the fight against the cancer. These energies were now free, and in addition were amplified by the organotic charge. In a phase of particularly intense depression the patient confessed that she felt herself ruined as a woman, that she felt herself to be ugly and that she did not see how she could suffer this life. She asked me whether the orgone energy could cure her anxiety neurosis also. This, of course, I had to deny, and the patient understood the reason.

Summarizing the sequence of events, we have the following:

1. In the beginning of the marriage, a severe stasis neurosis due to the husband's impotence.

2. Repression of sexual excitation, resignation, depression and a decade of abstinence.

3. The sexual excitations disappear while the cancer disease develops. As we shall see later, the cancer metastases developed exactly in those organs which played a dominant part in the muscular armor

which repressed the sexual excitation.

4. Elimination of the tumors by the orgone energy, physical recovery of the patient and reappearance of sexual excitability.

5. The high-pitched sexual excitation ends in disappointment; the old stasis neurosis reappears.

This constellation then resulted in a general shrinking of the vital apparatus.

One day there occurred a mishap. The patient left the orgone box and began to dress. She bent over to pick up a stocking and suddenly let out a shriek. We found her pale, with a thready pulse, on the point of fainting. We became frightened because we did not know what had happened. We, too, felt the collapsed vertebra to be a Damocles' sword. Nobody knew when the patient might suffer a fracture of the spine. Just because this fear seemed justified, it lent itself so well to a rationalization of the patient's neurosis. When the patient calmed down it was shown that she had only experienced a fright. For a moment she had believed that by her swift movement she had really broken her spine. Actually she had only suffered a slight strain at the shoulderblade; she had made too swift a movement with a hyper-tonic muscle. During the next few days, the patient felt well, but four days later she complained of heavy "*pressure in the chest*" and "*weakness in the legs*." During these days, the reflexes were normal. Three days later she again felt more strength in her legs, but the pressure in the chest persisted. On one of the following days, during a conversation in the treatment room, the patient suddenly cried out and doubled up, so that everybody present immediately thought of a fractured vertebra. Yet, all reflexes were absolutely normal. But now there was a new symptom which kept the patient in bed for many months and which deceived a number of physicians.

When the patient doubled up, she

stopped breathing; she no longer could breathe out properly and kept gasping for air. I had the impression of a *spastic contraction of the diaphragm*, a diaphragmatic block.

The pain in the lower ribs about which the patient now complained could be ascribed either to this spasm or to the mechanical pressure of the collapsed vertebra on a sensory nerve. *The collapsed 12th vertebra corresponded to the costal insertion of the diaphragm.* What happened during the ensuing months was essentially a clash of opinions as to which of the two interpretations was correct. I advised the relatives to take the patient to the orthopedic surgeon whom she had consulted previously. The surgeon declared that the spine and the pelvis were free of shadows and metastases and that the patient's condition was due to a mechanical lesion at the 12th dorsal vertebra. What had made the metastases disappear he did not inquire about. He prescribed bedrest in a plaster cast. The patient's brother refused to take this advice because he had followed the course of his sister's disease with great understanding and was convinced of the correctness of my interpretation.

It was during this period that I first began to understand the connection between the lesion of the 12th vertebra and the biopathic contracture of the diaphragm. It could be no accident that the diaphragmatic spasm—a symptom so well known to the vegetotherapist—should appear just at this time. There also seemed to be significance in the fact that one of the main metastases had appeared just at the insertion of the diaphragm. This *concurrency of diaphragmatic spasm and lesion of the vertebra* complicated the clinical diagnosis considerably; on the other hand, it opened an avenue of approach to the understanding of the extremely important *connection between emotional muscle spasm and the localization of metastases.* One of the tasks of this

series of articles will be to demonstrate the fact that *the localization of a cancer tumor is determined by the biological inactivity of the tissues in its immediate neighborhood.*

The orgone treatment had to be interrupted because the patient was again bedridden. Renewed examination at a cancer hospital and by private physicians revealed calcification of the defects in the spinal column and the absence of cancer growths. The original breast tumor did not reappear. But nobody could foresee whether or not new cancer growths might appear. I saw the patient repeatedly at her home. She complained of violent pains in her lowermost ribs. The pain was neither constant nor definitely localized; it appeared at various places along the costal margin and could always be eliminated by correcting the breathing. The whole thing looked like a neuralgia with a marked hysterical component. The patient lay flat in bed and gave the impression of being completely unable to move. If one tried to move her arms or legs, she would cry out, become pale and would break out in a cold sweat. A few times I succeeded in getting her out of bed into an easy chair by making her breathe deeply for about 10 minutes. The relatives were amazed that I should be able to eliminate the pain so easily. They had seen the tumors disappear and had had this confirmed by outside physicians. As I worked without drugs or injections, my orgone therapy seemed mysterious. In order to counteract this impression, I tried to explain to the relatives the mechanism of the disturbance. They realized very soon that the pain could not be due to the lesion of the vertebra, otherwise it would have been sharply localized and it could not have been eliminated by improved respiration. At that time, I had as yet no idea of the fact that in reality the patient did not have any pain *but a panicky fear of the onset of pain.*

An intercostal injection of an anesthetic

was tried at the point where the pains were most violent. The anesthetic had no effect; shortly after the injection the pains appeared at *another* rib. The physicians who had been convinced that the pains were the result of the vertebral lesion finally had to admit that they were essentially "functional." But nobody could tell what was the "meaning" of the "functional" symptom. In addition, to most physicians "functional" means "not organic," that is, "not real but imaginary."

One day I found the patient again in violent "pain." She was gasping for air and produced peculiar groaning sounds. The condition seemed serious, but gave way promptly when the patient succeeded in breathing down and when the spasm of the jaw muscles was released. I turned over the work on the respiration to a colleague because I was going away for two months. He reported later that again and again it had been possible to eliminate the pains by the establishment of full expiration.

The patient was taken to a cancer hospital once more. The hospital physician confirmed again the complete absence of metastases in the bones. He doubted that Xray therapy would eliminate the pains or that a surgical procedure at the nerve of the 12th segment would help. This was 5 months after the initiation of the orgone therapy, and 3½ months after its interruption. When the patient's brother told the hospital physician about the result of the orgone therapy, he became very reserved. He said he could not go into that until it was "recognized by official medicine." He overlooked the fact that he himself was a representative of "official medicine" to which he shifted the responsibility for the recognition of the results of the orgone therapy in this cancer case.

The patient soon returned home and continued to lie flat in bed. The atrophy (of disuse) of her muscles progressed, and the danger of a recurrence of the tumors

was considerable. A month later, I saw the patient again. I succeeded again in eliminating the pains by improving respiration. The patient was able to get out of bed but felt very weak. One day, during one of these attempts to stay out of bed, I saw the patient develop severe anxiety; she implored me to be allowed to go back to bed. At that moment, *she had no pains*. I insisted on her staying up. All of a sudden, she began to tremble violently, was scared, broke out in a cold sweat and turned pale. In other words, she experienced a violent, shock-like reaction of the autonomic system to the standing up. I did not let the patient go back to bed because I noticed that *some fear made her want to go back to bed*. A few moments later, there were visible convulsions in the upper abdomen, and she gasped for air; the chronic spasm of the diaphragm dissolved itself into clonic convulsions of the abdominal musculature. After this, she felt greatly relieved and was able to move about freely.

Now, I understood a basic feature of biopathy. The biological charging of her organism by the orgone had resulted in sexual excitations; to these, she had reacted with a contracture of the diaphragm. (The repression of sexual excitation by way of a chronic attitude of inspiration is a phenomenon well known to the vegetotherapy.) This contracture of the diaphragm apparently caused the "pressure in the chest" and the pain-like sensations which were ascribed to the collapsed vertebra. The pressure in the chest disappeared every time I succeeded in overcoming the inspiratory spasm and thus in restoring the pulsatory movement of the diaphragm. But it was just these contractions and expansions of the diaphragm which caused violent anxiety which the patient tried to escape by falling back into the inspiratory attitude. As was shown now, the "danger" of a clonic dissolution of the contracture was too great when the patient was stand-

ing up or walking around. *The danger consisted in the violent convulsions which threatened to dissolve the diaphragmatic spasm. She did not dare leave her bed because she was very much afraid of these convulsions.* It was this fear, then, which kept her in bed, although it was not the exclusive motive for staying in bed.

Doubtless, the diaphragmatic spasm created neuralgic pains in the ribs and at the insertion of the diaphragm. But this spasm accounted only in part for her enormous fear of motion; the more important part was her fear that if she moved she would "collapse" or "break her back."

The involuntary convulsions of the diaphragm which threatened to set in when she got up only seemed to justify this fear. Thus, she really did not suffer from acute pains, but from a *tremendous fear of sudden violent pains*. This fear was further increased by the experience of a few months before, when "something seemed to crack when she moved too suddenly." In other words, she suffered from a misinterpretation of normal vegetative sensations such as accompany the movement of the diaphragm. Her staying in bed was a strong defense mechanism against the fear of "breaking apart." This fear would arise as soon as the diaphragmatic spasm was about to dissolve itself into clonic movements. This she would counter with an intensification of the diaphragmatic contracture. Of course, this fear and her reaction to it had far-reaching physical results, for it led to a general muscular tension which was to prevent any motion; the long duration of the consequent immobility led to an atrophy of the musculature. For example, she was hardly able to lift her arms; when she lifted her left arm, she lifted it with the aid of her right. She was unable to lift her legs and hardly able to bend her knees. The head was kept rigid. Passive movement of the head was strongly resisted. The patient was afraid of "breaking her neck." All physicians had

warned her against rapid movements because the fifth cervical vertebra was collapsed.

On one of the following days I found the patient in a very bad condition. In spite of a strong urge to defecate, she had not gone to the bathroom for several days, in order not to have to leave her bed. As on previous occasions, the "pains" disappeared when the patient was made to breathe, and she was able to get up. She had an enormous bowel movement without any difficulty.

I told her brother that I would undertake an attempt at vegetotherapy for two weeks (without remuneration), but that I would have to stop if it showed no results. She moved to my neighborhood and for the next few weeks I worked with her for about 2 hours every day. This work disclosed the phobic background of her biopathic condition.

THE CHARACTEROLOGICAL EXPRESSION OF THE SHRINKING BIOPATHY

Six months after the collapse in my laboratory the patient developed a paralysis of the rectum and the bladder. The question was whether this was due to a local mechanical lesion or, as I suspected, to a functional shrinking of the autonomic system. In the first case, emotional motives would be absent and the symptoms would point to a sharply localized lesion. In the second case, one would expect prominent emotional and character disturbances and an inconstancy of the paralytic symptoms.

When I explained to the patient again and again her *fear* of the pains, she became capable of moving in her bed without any pain. In order to be able to move, however, she always first had to mobilize her respiration and to loosen up the spasms of her jaw musculature. As she put it, she always had first "to get rid of the fear of moving." In the case of mechanical lesion of the nerve, this would not have been possible.

When she succeeded in turning on her

side or her stomach, she always seemed extremely exhausted. We looked for the reason for this peculiar exhaustion and finally found it in an extreme tension of the musculature of the neck and throat. The patient looked as if her head were being pulled into the thorax. It was the same attitude one involuntarily assumes to protect oneself against a sudden blow on the head. This muscular attitude was completely autonomic; the patient could neither control nor consciously loosen it. When this contraction of the musculature of the neck and throat occurred, respiration ceased and the patient's throat rattled as if she were choking. In order to loosen up the spasm, I had her stick her finger down the throat. To this she promptly reacted with a gag reflex which was so violent that she turned blue in the face. After a while she felt "greatly relieved in the throat."

In connection with these throat reflexes, she began to tell me spontaneously about her anxiety dreams. She dreamed every night, with intense anxiety, that she was falling into an abyss; that she was choking or that something was falling on her and she was being destroyed. With such dreams of falling the vegetotherapist is very familiar. They occur typically toward the conclusion of a character-analysis, at a time when pre-orgastic sensations in the abdomen and the genital begin to appear and are suppressed before becoming conscious. These sensations, if anxiety-laden, are experienced as *falling*. This is based on the following mechanism:

Pre-orgastic excitation is the onset of an involuntary convulsion of the plasma system. If the organism is afraid of this convulsion, it will develop—in the midst of an expansion which should end in a convulsion—a *counteracting contraction*, in other words, an *inhibition of the expansion*. This results in a sensation like that which one experiences when an elevator suddenly starts down or an airplane drops

rapidly. *The sensation of falling is the perception of a contraction of the autonomic system in the process of inhibiting an expansion.* The typical falling dreams are often accompanied by a sudden contraction of the total body.

In the case of our patient this means the following: She reacted to vagic sensations of expansion regularly with spastic contractions; her organism became fixated, as it were, in the muscular spasms in the throat and the diaphragm, as if "not to lose hold." The fear of the convulsions diminished considerably when I succeeded in eliminating the spasms by eliciting the gag reflex. Then the movements which she executed in bed no longer resulted in spasms but in pleasurable sensations.

Every plasma current begins with a central contraction (tension) which dissolves itself into a vagic expansion;¹ the vagic expansion goes with the sensation of pleasure; in the case of orgasm anxiety, it is inhibited and results in muscular spasms. We understand now: *The patient suffered from a spastic reaction to vagic expansion as the result of orgasm anxiety. Biopathic shrinking begins with a spastic restriction of biological pulsation.* It differs from the simple sympatheticotonic stasis neurosis insofar as, here, the impulses to expansion gradually subside, while in the stasis neurosis they maintain their intensity. A sharp distinction, however, cannot be drawn.

This mechanism of spastic reaction to vagotonic impulses of expansion functioned in a different manner in the different muscle systems. For example, when I tried to move the patient's arms passively, she always reacted with a contraction of the shoulder musculature and the flexors of the arms; the reaction was similar to the muscular negativism and rigidity in catatonics. The patient presented the picture of a flaccid paralysis of the arms. When I asked her to hit my arm, she was

¹ This can be directly observed in the ameba *limax* at a magnification of 2000x.

at first unable to do so. But when I made her imagine that she was now letting out her suppressed anger, she was able, within five minutes, to get rid of the paralysis and to hit quite freely. At the end, she experienced pleasure in the motion and the action. The paralysis seemed to have been eliminated to a considerable extent. Thus, the patient was able to overcome her fear of expansion and of the plasmatic pulsation temporarily. This regularly improved her general condition considerably.

The same thing could be observed when I sat her up passively in bed. She always became frightened, began to gasp for breath, turned pale and repeated several times, with an expression of severe anxiety, "You shouldn't have done that." But when I repeated the procedure several times she even became able to sit up by herself. She was absolutely amazed and said, "It's a miracle how this is possible."

From then on, I had the patient continue to elicit the gag reflex, bite the pillow, hit my arm, etc.; all this in order to produce clonic contractions in the musculature of the throat and the shoulders. I knew from vegetotherapeutic experience that biological energy which is bound in spastically contracted musculature can be released only by clonisms. So it was in this patient. After about half an hour of *active* production of various reflexes, *involuntary clonic spasms began to set in in the musculature of the arms and the shoulders*. The legs also began to tremble. This trembling could always be intensified by gentle flexion and extension.

When these spasms appeared for the first time, the patient became very much frightened. She did not know what was going to happen to her. It was the very same fear of involuntary contractions which she avoided by her spastic contractions. After a few minutes, however, she began to enjoy the spasms. Gradually, the musculature of the throat began to participate in the spasms; the patient was

afraid she was going to vomit. At one point she looked as if she were going to faint. I asked her to give free rein to the spasms. After a while they became less intense: the biological energy had been discharged. She sank back in the bed exhausted; her face was red, her respiration deep and full. The gag reflex could no longer be elicited, and the patient said, "My throat is peculiarly free—as if a pressure had been taken away." Similarly, the pressure on the chest had disappeared.

On the following day, the patient breathed normally, and I proceeded to relieve the paralysis of the legs by producing clonisms of the leg musculature. This was possible to a certain degree by slowly moving the legs, which were bent at the knees, apart and again together. I had not prepared the patient for the pre-orgastic sensations which are likely to appear with the dissolution of contractures in the leg musculature. All of a sudden, she inhibited her respiration, set her jaw, turned pale and developed a facial expression which I can only describe with the word "dying." The reaction was so violent that I became frightened. There could, however, be no mechanical lesion, for I had moved the legs only very slowly and gently. The patient emitted sounds such as one makes with the most severe pains in the chest. The sounds were a mixture of groaning and rattling. From vegetotherapeutic experience I knew that this was the patient's reaction to vegetative currents in the genital. We know from vegetotherapy that orgastic sensations, when inhibited by orgasm anxiety, are experienced as a *fear of dying*; "dying" in the sense of falling apart, melting, losing consciousness, dissolving, "nothingness."

The patient groaned heavily, was pale and blue, turned her eyes up and seemed exhausted. Never before had I seen the neurotic reaction of dying so realistically. With all the work on disturbances of the orgasm I had done during twenty years,

I had still underestimated the depth at which the disturbances of the function of biological pulsation are at work. True, my contention had always been that the orgasm is "basic biological functioning *per se*." But never before had I seen an organism "die" so realistically as a result of orgasm anxiety. I told the relatives that quite possibly the patient would not survive more than a few days. It was clear to me that the shrinking of her vital system might well continue into actual death. This being the case, I would have relinquished any further efforts had it not been for the fact that seven months earlier, when the patient first came to me, she had also been on the point of dying. There was nothing to be lost by going on and a great many insights into the nature of the shrinking biopathy to be gained.

The following day I was called on the telephone by the relatives who said the patient was actually dying, that she was hardly breathing at all and was unable to have a bowel movement. When I saw the patient, she really seemed to be dying. Her face was blue and sunken, she emitted rattling sounds and whispered, "This is the beginning of the end." I found her pulse to be rapid but forceful.

In the course of about fifteen minutes, I was able to establish a good rapport with the patient. I asked her whether she had had—at any time previous to her developing tumors—the feeling that she was going to die. Without any resistance, she related that *as a child she had often rolled her eyes up and played at "dying."* The rattling and groaning sounds which she made now were also familiar to her from her childhood. She used to make them when she felt a constriction in her throat; as she put it, "when something pulled together in her throat." Now it became clear that the localization of *one of the cancer metastases at the fifth cervical vertebra was due to a spasm of the musculature* of the throat which had been

present for decades. The sensation of constriction in the throat, the patient continued, went hand in hand with a pulling in of the shoulders and a tension between the shoulderblades, that is, at exactly the region where later the cancer pains developed.

Now that the patient talked with me wide awake and lively, I made her "play at dying." Within a few seconds, she succeeded in producing consciously the same picture by which she previously had been overcome involuntarily. She turned her eyes upward so that the lids were closed except for a narrow slit through which the whites of her eyes were just visible, fixed her chest in the inspiratory position and emitted groaning and rattling sounds. It was not easy to bring her back out of this dying attitude; but the more frequently she assumed this attitude consciously, the easier it became for her to give it up again. This was entirely in accord with vegeto-therapeutic experience: *by practice, an autonomic function can be made objective and finally subject to conscious control.*

I asked the patient whether she thought that she was unconsciously committing suicide. She started to cry and said there was no point in going on living. Her illness had ruined her sexual attractiveness; she could never again be happy; and without happiness she did not want to live. I had the patient again elicit the gag reflex. Promptly, the clonic trembling in the arms and the throat reappeared, though not as strongly as the day before. She even succeeded in sitting up by herself, but her legs failed her. I had the impression that the upper part of her body was functioning while the lower part, from the hips down, failed to function.

For several days after this, the patient felt well and gay. One day, however, she suddenly relapsed into the dying attitude. I saw immediately that it was not play-acting, but that she was overwhelmed by her biopathic reaction. Her respiration was

shallow and labored, her nose pointed, her cheeks were sunken and her throat rattled heavily. I did not understand why this happened just at this point. She complained of violent pains and was completely unable to move. I succeeded again in restoring normal respiration. Again, intense clonic spasms occurred in the throat and the torso, but the lower extremities remained "dead." I had her again elicit the gag reflex. After this, the spasms became more intense.

I noticed that the pelvis tended to participate in the spasms but that she held back. The spasms lasted for about ten minutes and then subsided. While previously one had had the impression of suffocation, now the patient showed definite vagotonic reactions: the face was flushed, the skin over the body was no longer pale. The pains due to the diaphragmatic spasm subsided. After a while, the patient began to talk. She was, as she said, afraid that "something was going to happen down there." She related that up to the time when she came to me for treatment she had occasionally obtained sexual gratification by masturbation. This was a very belated correction of her earlier statement that she had been living in complete abstinence for over 10 years. As early as the first week of the orgone treatment, she had suppressed every impulse to masturbate because of phantasies of sexual intercourse with me. Since then she had not dared to touch her genital. The inhibition of masturbation, together with the phantasy, led to a stasis of sexual excitation, which, furthermore, was intensified by the biological charge by the orgone. The intensification of her sexual needs increased her anxiety. Thus she developed the phantasy that she might break her spine. The straining of the shoulder muscle when she tried to pick up her stocking seemed to confirm this fear, as if she had said to herself, "See, I knew it was going to happen."

The day after she had told me about her

masturbation phantasies, I found her in the best of moods, full of hope and without complaints. The talk of the day before had made it possible for her, for the first time in months, to masturbate again. She had experienced a good deal of satisfaction. She was now able to control her diaphragmatic spasm very well. She was constipated, but felt the urge for defecation; only her fear of motion kept her from going to the bathroom. She moved much more easily in bed. She was even able to sit up all by herself, which amazed and pleased her a good deal. For the first time, she understood the chain of causes and events: fear of spinal fracture → fear of pain → inhibition of respiration by diaphragmatic block → pain in the chest → fear of spinal fracture. Now, however, the inhibition of motion by the fear of pain did not set in so readily. The fear did not appear until the motion required a good deal of effort. We now understood the connection between her fear of spinal fracture and her fear of "motion."

On the next day, I found the patient again with poor respiration, full of complaints, and assuming the dying attitude. She could not say what had brought this about. The relatives told me that the day before she had felt very well until the evening. Then things had taken a turn for the worse after the following episode. Her boy was in the bathroom adjoining her room. She heard a noise and got terribly frightened. All of a sudden she had the idea *that the boy was closed in in a very small space and was going to be smothered*. During the night she slept poorly and had a number of severe anxiety dreams, some of them falling dreams. All I could do on this day was to improve her breathing which reduced her complaints about the "pains."

During the next few days, the patient felt much better, being able to move without pain and to lift her legs. During a treatment hour, she happened to get near

to the edge of the bed, whereupon she became pale, stopped breathing, and cried out. *She was afraid of falling out of bed.* Her reaction was clearly exaggerated and did not correspond to any real danger. She related spontaneously that the summer before, at the hospital, she had asked to have an additional bed put at each side of her bed, because she was afraid of falling out of bed. I lifted her toward the edge of the bed, and although I held her firmly, she yelled with fear. The *fear of falling* which was at the basis of her fear of motion was now quite evident.

On the next day she sat up in bed. She had no pain, but developed violent anxiety, broke out into a sweat and hysterical crying. She said she was going to die; that she had been fighting death for so long, but this was the end. She cried for her boy. She asked me for an injection which would make her die so that she did not have to suffer any longer. "I don't want to get out of bed, I want to stay right here." After a while, she quieted down and found to her great surprise that she was able to sit up without any effort. But gradually she developed violent clonic spasms all over her body, particularly intense at the shoulders. She was extremely afraid of these spasms; that was the reason for her staying in bed. Whenever she was forced to sit up she felt the spasms coming. She no longer had her fear of falling, but the connection was clear. The violent clonic spasms of her musculature formed the physiological basis of her neurotic fear of falling. During the night, she had nightmares of falling into great depths, of heavy things falling on her, of men attacking and threatening to *choke* her. Now she remembered that she had suffered from exactly the same anxiety states for a long time in adolescence. She also remembered a phobia she used to have at that age. When she would walk on the street and hear footsteps behind her, she would begin to run, for fear that

"somebody was after her." This fear usually was so intense that her *legs "failed her"* and she always had the feeling that she was going to fall down. She recognized in this the very same bodily sensation which she experienced when she had to sit up in bed now. Then also, her legs would fail her and she became afraid of falling. With that, she would have the sensation of a spasm of the diaphragm and would be "scared to death."

All this shows unequivocally that the motor paresis of the legs was caused by a phobia, *a phobia which had dominated her as far back as puberty, long before she had developed cancer.* The paresis which she now had developed was nothing but an intensification of this old motor weakness in the legs. This old fear of falling now became associated with the idea of the spinal fracture and was thus thoroughly rationalized. The old phobia of falling was the real forerunner of her later paresis.

The day before she had had to go to the bathroom all the time. The movements of her intestines and bladder were "extraordinarily lively." The previous night she had been restless. In the late forenoon, she felt unable to urinate. She felt her legs were without sensation. On examination, I found a reduced sensitivity to pin pricks up to the 10th segment. The knee jerk, the Achilles reflex and the abdominal reflexes were normal. I had been told on the telephone that she was unable to move her legs. In reality, the motility of the legs was only reduced, but not absent. The deep sensitivity of the joints of the toes was reduced. It was the picture of a functional paresis. There were no definite symptoms either of a flaccid or of a spastic paralysis. The only point in support of the assumption that the lesion of the 12th vertebra had something to do with it was the fact that the sensory disturbance in the upper abdomen had a fairly sharp upper limit.

The next day, the patient was again able

to urinate, but three days later she became unable to control her anal sphincter. The reflexes were normal, but the patient's fear of sitting up returned.

She was again taken to a hospital for a general check-up. Xrays showed the spine, pelvis and legs free from metastases, but there were new metastases in the cranium and in the humerus. That is, *the new tumors made their appearance far away from those regions which showed the paresis. Functional biopathy and carcinomatous growth had nothing to do with each other.*

The patient remained at the hospital for two weeks. No neurological examination was done. The paresis of the legs was considered a result of the vertebral lesions; none of the physicians discovered its functional nature. They told the relatives that the patient would live for two weeks at best.

As nothing was done for the patient at the hospital except that she was given morphine injections, the relatives took her back home. I saw her on the day of her return. She was very apprehensive about her motions and stressed the fact that the hospital physicians had warned her to be extremely cautious in her motions because "the spinal column was pressing on the nerve and it might break." This admonition on the part of the physicians naturally confirmed and reinforced the patient's phobia. The relatives wished me to undertake another experiment with orgone in order to eliminate the tumors of the cranium. On that day, I was not able to palpate any tumors at the cranium.

I observed the patient for another four weeks at her home. During this time, *all reflexes at the legs were normal, the bowels and the bladder functioned normally again.* However, the atrophy of the musculature and the bones progressed rapidly. She had developed a putrid bed sore at the buttocks. The legs moved in reaction to painful stimuli, but showed

few spontaneous impulses. She continued to have nightmares of men falling into an abyss, of an elephant charging at her and of being "as if paralyzed," unable to move. During the day, also, she felt anxiety in the eyes and in the chest. The pains had completely disappeared, but the fear of motion and of a spinal fracture persisted.

We had a special orgone accumulator built for her bed. The effect of the orgone showed itself in a reduction of the pulse rate from about 130 to between 80 and 90, in a general feeling of well-being and the disappearance of anxiety. The blood picture, which in the past few months had taken a turn for the worse (50% Hb., T-bodies, positive T-cultures, about 50% T on autoclavation) also improved rapidly. The impulses in the legs increased in frequency and intensity.

Then there occurred a sudden and unforeseeable catastrophe which sealed the fate of the patient. One night, as she moved in bed, she fractured her left femur. She had to be taken to a hospital. The physicians were amazed at the thinness of the femur. They could not understand how the breast tumor could have disappeared. The patient was given morphine, declined during the following four weeks and finally died.

The orgone therapy had prolonged her life for about 10 months, had kept her free of cancer tumors and cancer pains for months and had restored the function of her blood system to normal. The interruption of the orgone treatment by the biopathic paralysis interdicts any conjecture as to a possible favorable outcome. What is certain is that in this case the real cause of death was the biopathic shrinking, and not the local tumors.

This case has given us important insights into the emotional and vegetative background of the cancer disease. Now we are confronted by the important question as to *what takes place in the blood and the tissues as a result of the biopathic*

shrinking; in other words, the question as to how the general shrinking of the autonomic system produces local tumors. I may anticipate: *The general result of biopathic shrinking is putrefaction in the blood and the tissues. The cancer tumor is only one of the symptoms of this process of putrefaction.* This finding requires extensive clinical and experimental substantiation; this will be given elsewhere.

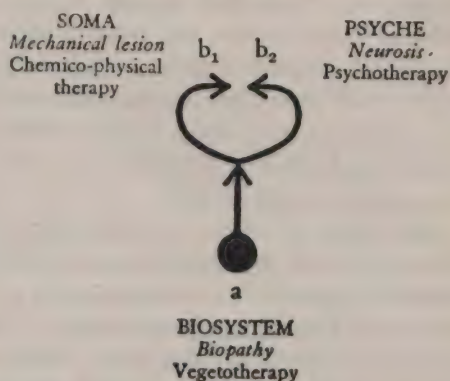
IV. CONCLUSION.

Let us briefly review our observations. The "dying" of the patient in the biopathic attack did not in the least give the impression of hysteria or simulation. The autonomic system reacted in such fashion that actual death was by no means improbable. The sunken cheeks, the cyanotic color, the faint, rapid pulse, the spasm of the throat, the failure of motility and the general physical debility were dangerous realities.

I venture the statement that each of these attacks was the beginning of an actual cessation of the vital functions. It was possible, by dissolving the spasms and by breaking the diaphragmatic block again and again to interrupt the process of dying. Death was again and again counteracted by vagotonic expansion. This cannot be a matter of *suggestion*. Suggestion in the usual sense could not possibly penetrate into these depths of the biological apparatus. What was possible, however, was to elicit the biological impulses to expansion in various bodily systems and thus, month after month, to arrest the shrinking process again and again. In order to do this, a good rapport with the patient, as a *part* of the vegetotherapeutic technique, was, of course, indispensable. Only in this aspect of the procedure might one be justified in speaking of suggestion.

Let us go back to our familiar diagram of psychosomatic functioning and try to find out at which place in the vital ap-

paratus the biopathy (in contrast to a mechanical lesion), as well as the vegetotherapeutic experiment, takes effect:



Every lasting energy stasis in the *biological* system (a) must of necessity manifest itself in *somatic* as well as *psychic* symptoms (b_1 and b_2). Psychotherapy attacks the psychic symptoms, chemico-physical therapy the somatic symptoms. *Vegetotherapy* has as its starting point the fact that psyche as well as soma have, from a point of view of bio-energy, the same root in the pulsating plasma system (blood and autonomic system). Vegetotherapy thus influences not the psychophysical function itself, but the common basis of psychic as well as somatic functions; it does this by eliminating the *inhibitions of biological functioning*, such as the respiratory block, the inhibition of the orgasm reflex, etc. Thus, vegetotherapy is neither a psychic therapy nor a physiological-chemical one; *it is biological therapy directed at the disturbances of pulsation in the vital apparatus*. Since these disturbances show their effects in all the more superficial layers of the psychosomatic apparatus—for example, as hypertension and cardiac neurosis in the somatic, as phobia in the psychic realm—vegetotherapy, of necessity, reaches these symptoms in the superficial layers also. Vegetotherapy, thus, is the most advanced existing method for the influencing of biopathic disturbances. For the time being, its field is limited to the biopathies.

In the cancer biopathy, the vegetotherapeutic treatment of the disturbances of respiration and of the orgasm is supplemented by the *orgone therapy* which is directed at the anemia, the T-bacilli in the blood and the local tumors. As succeeding articles will show, we are fully aware of the enormous complexity of the problem as well as of the largely experimental character of this cancer therapy.

According to the prevalent concepts there are only mechanical or chemical lesions of the somatic apparatus on the one hand and functional disturbances of the psychic apparatus on the other. Sex-economic investigation of the cancer shrinking biopathy reveals a third, more deep-reaching disturbance: *The disturbance of the plasma pulsation at the common biological basis of soma and psyche*. What is fundamentally new here is the finding that *the inhibition of the autonomic sexual function can produce a biopathic shrinking of the autonomic nervous system*. The question remains whether this etiology can be found in all forms of cancer.

There is a general misconception that the organism is divided into two independent parts: one is the physico-chemical system, "soma," which is destroyed by such agents as a cancer; the other is the "psyche" which produces hysterical phenomena, so-called conversion symptoms, in the body, and which "wants" or "fears" this or that and has nothing to do with the cancer. This artificial splitting up of the organism is misleading. It is not true that a psychic apparatus "makes use of somatic phenomena"; nor is it true that the somatic apparatus obeys only chemical and physical laws, but does neither "wish" nor "fear." In reality, *the functions of expansion and contraction in the autonomic plasma system represent the unitary apparatus which makes the "soma" live or die*. Our patient demonstrated *the functional unity of psychic resignation and biopathic shrinking exceedingly well*. In

her, life began to function poorly; the function of expansion began to fail. To express it psychologically: there was no impulse behind motion, action, decision and struggle. The vital apparatus was, as it were, fixed in the reaction of anxiety; psychologically, this was represented in her fear that motion might result in a fracture somewhere in the body. Now, motion, action, pleasure and expansion appeared to be "a danger to life." The characterological resignation *preceded* the shrinking of the vital apparatus.

The motility of the biological plasma system itself is damaged by the biopathic shrinking. The fear of motion has its basis exactly in this vegetative shrinking. The plasma system shrinks, the organism loses its autonomic balance and the self-regulation of locomotion. Finally, a shrinking of the body substance sets in.

The inhibition of plasmic motility by the shrinking fully explains all aspects of the disease picture; it explains neurotic anxiety as well as functional paresis, the fear of falling as well as the muscular atrophy, the spasms as well as the biological disturbance which breaks through as "cancer" and finally ends in general cachexia. For it was possible again and again to make the patient develop new living impulses by vegetotherapeutically correcting her breathing. The diaphragmatic spasm is the central defense mechanism in the biopathic disturbance of the organism: The patient really breathes poorly; she really ventilates her tissues insufficiently; the plasmatic locomotor impulses are actually insufficient for the maintenance of co-ordinated movements; the fear of falling and of suffering damage has a real basis and is not "imaginary"; more than that, *the imagined catastrophe of falling has itself a real basis in the restriction of biological motility*. The hysterical, functional character of the paresis thus gains a factual biopathological basis. There is a difference only in degree be-

tween hysterical paralysis and paralysis as a result of biopathic shrinking.

In medicine, functional paralyses are usually looked at with some irony; the concept is still prevalent that a functional paralysis is more or less "simulated." I would like to state that functional disturbances of motility are *much more serious and far-reaching* than are paralyses which result from a mechanical lesion. In the case of the mechanical lesion, the biological functioning of the total organism is not affected. *A functional paralysis*, on the other hand, *is the expression of a total biological disturbance*. In this case, the function of plasmatic impulse formation in the biological core of the organism is itself disturbed and may result in a more or less extensive loss of tissue (muscular atrophy, anemia, cachexia, etc.). To say that the mechanical lesion cannot be influenced by suggestion, while the functional disturbance is amenable to suggestion, means nothing. For the "suggestion" which may bring about an improvement

in the functional paralysis is in reality nothing but a pleasurable stimulus for the biological system and thus causes it to reach out for new life possibilities and to function again.

The basic disturbance in the functioning of the body plasm, represented by chronic sexual stasis, character rigidity and resignation, and by chronic sympatheticotonia, is to be taken much more seriously than the mechanical lesions. The mechanistic and purely materialistic concepts of medicine of today have to be partly replaced and partly overcome by a functional concept. This functional concept made it possible to make a breach in the wall which hitherto has made the cancer problem inaccessible. Succeeding articles will show to what extent this functional concept is generally applicable. We shall next turn our attention to the local changes in blood and tissues which are caused by the biopathic shrinking.

Concluded February 10, 1942

SHOCK THERAPY AS A SUBJECTIVE EXPERIENCE†

By MARY ROBERT,* M.D.

Editor's note: The literature on shock therapy is so voluminous that it would be useless to add still another article unless it had something special to contribute to the problem. This is what the following article does. Most articles on the subject are concerned only with the statistical results of the treatment and with the nature and incidence of complications such as bone fractures during the shock. Only very rarely is the question discussed, "What is the curative factor, in other words, the rationale of the treatment?" As it stands, shock therapy is a purely empirical procedure and there is no knowledge of the curative mechanism. The theories that have been advanced are unconvincing or patently erroneous.

The present article is remarkable for two reasons. First, it shows the rationale of shock therapy and, with that, its inevitable limitations. Second, the author, in order to obtain first-hand knowledge, underwent a shock herself and thus became able to describe the subjective experiences of the shock. Thus, although this article was written some two years ago, it is still far ahead of the present-day literature on the subject.

The problem of shock therapy, its results, indications and dangers, is the subject of lively discussions in medical periodicals. There are two opposing viewpoints in the question. One group of observers maintains that shock therapy, in particular the cardiazol shock, cures certain types of schizophrenia, if they have not lasted too long, in 30-40% of the cases, while depressive states are cured in 60-70%. The other group maintains that cure takes place only in patients who would have had a spontaneous remission, i.e., who would have gotten well anyhow, without treatment. They concede that the treatment may bring about a rapid improvement, but point out that such an artificial improvement means little. To judge from the literature, this objection is contradicted by the fact that "cures"

take place in many patients who, up to the time of the shock treatment, showed no tendencies whatsoever for spontaneous remission. According to my own observations, this is particularly true in depressive states. However, the period of observation is so short and the statistical material so little evaluated, that we have as yet no sufficient material to compare treated and untreated cases. For this reason, I shall not try any such differentiation.

The most astonishing aspect of the whole discussion is the fact that very seldom is the question raised as to *what it is* that brings about the cure or improvement.

Some observers ascribe the effect to an action upon the midbrain, the thalamus or other subcortical centers. Others, in a more popular vein, speak of the psychic experience of the shock as the therapeutic agent, and think one might just as well use any other shock experience, such as treatment with sulfosine or carbon dioxide. What they have in mind is the "therapia

† Translated by the Editor.

* This is a pseudonym. Present conditions force us, unfortunately, to withhold the names of our European co-workers.

violenta." Remarkably enough, any basic concept as to what really takes place is rarely found.

Meduna as well as many others have given detailed descriptions of the seizure. In spite of certain differences, there are many similarities between the cardiazol shock and the less well-known benzidine treatment. To mention only a few of the main points: A few minutes after the injection of cardiazol the patient gets red in the face, begins to clear his throat and to cough, that is, he gets a dry throat; looks confused and usually lets out more or less frightened shrieks; then there are clonic spasms with loss of consciousness, and marked cyanosis; after this, the spasms become tonic, pulse and respiration seem to stop; often there is incontinence of urine and flatus; after about half a minute to a minute, the spasms become again clonic and respiration returns. There is, typically, deep, snoring, complete expiration, often followed by sleep. The color becomes again natural. The pulse, which right after the seizure was rapid, gradually returns to normal, and the whole musculature—except perhaps localized parts—become atonic (relaxed). Immediately after the seizure, the patient has no recollection of it and appears cheerful, like slightly intoxicated. Sexual activities, masturbation and amorous behavior are common. To mention only a few of the statements made by patients: Every time before the shock occurs, Mrs. N. calls to the physician, "Come to your girl, if you want to have me. You can have me, but I don't want to die for it." And before she loses consciousness, "Say, it itches so down there." Miss K. tries every time to bare her genitals and talks in a confused way about Bill who will come and take her. Miss R. says, "Put out all these girls. You may stay here and take me, but we must be by ourselves." Many interpret the injection as sexual penetration. Miss S. wrote a long letter about the "smut psychiatry" we did with her in

order to arouse her sensual desires. Mrs. P. wrote her husband, imploring him to take her home, saying we were accusing her of adultery; this letter was also full of folksy expressions. Some of these patients had constantly been talking about sexual activities even before the shock treatment. But no other form of treatment had provoked any acute sexual symbolization; the injection resulted in a very marked increase in sexual phantasy life. In other patients, this was an entirely new phenomenon. We know that the syringe as such has the unconscious significance of the sexual act, of impregnation, etc., but with the shock syringe this is true to a far greater extent. No other form of treatment provoked that outspoken amorous behavior which is typical in so many patients right after the shock. A demented and completely mutistic girl of 17, after the shock called for her mother and tried to embrace those around her. These examples are not meant to show that the affective expressions and the energy discharges are in all cases of a localized sexual nature; they do show, however, that in all cases the affective and vegetative discharges become more lively. Where the shock treatment is at all effective there is always an attempt on the part of the patient to establish contact. There seems to be a general activation of all primitive reactions in those patients who react to the shock. In popular language, one might say that the "animal," the "flesh," gets away from the inhibition by the "spirit." This is difficult to bring about in any other way, because the inhibitions, "morality," prevent it.

As far as the pupillary reactions are concerned which have been described—marked dilatation with the seizures and marked constriction afterwards—I find in my material a great variation from case to case. There is either dilatation without constriction after the seizure, or no or only little dilatation but marked con-

striction; in most cases one finds both reactions. My material seems to indicate that the best results are obtained in those cases which show the most outspoken pupillary reactions.

My material consisted of 35 women; three of these I did not observe long enough, so that I am considering only 32. They fall into four groups:

Group I: 10 of these 32 patients were so much improved that they have been discharged or are going to be discharged soon. 9 out of these 10 showed dilatation of the pupils with the seizures and constriction afterwards. One of them showed dilatation with the seizures but little constriction afterwards; she belongs to the least improved in this group. None of the 10 showed any noticeable change in character.

Group II: 13 patients showed a noticeable improvement although they still present definite signs of their psychosis. The best results in this group compare with those in Group I, the poorer results with those in Group III. These 13 showed less uniformity in their pupillary reactions. The most frequently observed reaction was dilatation with the seizures (increased sympatheticotonia) but little or no constriction after the seizure, or even dilatation after a temporary constriction.

Group III: 7 patients showed practically no improvement at all. These showed a very variable pupillary reaction; either dilatation but no constriction, or very labile pupils.

Group IV: 2 patients have to be considered separately. They showed considerable improvement after one course of treatment, but had a complete relapse when they were transferred to the open ward. A second course of treatment did some good, but did not approach the result of the first. These two patients, during the first course of treatment, showed dilatation of the pupils with the seizures and constriction afterwards. During the

second course of treatment, there was some dilatation, little constriction; or occasionally, no reaction at all with the seizures but dilatation afterwards; in other words, a completely paradoxical reaction.

It would be interesting if it could be shown that the refractory cases (i.e., those who show no improvement from shock therapy) are those in which there are no or only slight vegetative reactions with the seizure. The material is still too small to state definitely that this is the case. It would explain the fact that the cases of long standing respond least to the treatment, because in them the pathological ways of functioning have become well established in the organism. The substantiation of this concept that the extent of the vegetative reactions is the essential element for improvement requires more vegetative tests and examinations than I had the opportunity to make. Nevertheless, the vegetative reactions were so definite as to justify this concept.

Many observers have mentioned the fear of the treatment which the patients develop after having undergone one seizure. However, the literature contains *neither a description of this fear nor an explanation for it*. Particularly in female patients, but also to a lesser degree in men, the anxiety after a few treatments is so intense that the patients feel as if they were going to be drowned or otherwise threatened with sudden death. (This is highly reminiscent of the pre-orgastic anxiety which one observes during vegetotherapy.¹) The patients say that they not only *feel* as if they were going to die, but that they are convinced every time that they *will* die. In reality, it is the fear that the inhibitions will "die" or that one is going to "lose oneself," "lose control." (Orgasm anxiety as observed during vegetotherapy always shows the same connection; but there also, patients express it as a fear of death.) This

¹ Cf. Walter Frank, "Vegetotherapy." *This Journal*, March 1942, 65-87.

anxiety is by far too intense to be "justified" on the basis of actual danger in the form of various complications of the treatment, like the fracture of a vertebra, etc. If such an accident happens, it becomes of course known in the wards; but there can be no doubt to anyone who has talked to these patients and has tried to calm them down, that this anxiety is based on certain physiological processes and a definite subjective experience.

In order to get a clearer picture of this subjective experience, the writer submitted to a shock treatment. A few seconds after the injection there was a pronounced feeling of tickling in the throat like a beginning cough; it felt as if the precordial region and the region over the sternum were being constricted; that is, there was the typical physical correlate of anxiety, like a claw gripping at the throat and the chest. Immediately afterwards there was a towering gray shadow in front of the eyes, a slight confusion and a buzzing sensation in the top of the head. It felt like the beginning of a narcosis or of a faint but was more unpleasant. It was a feeling of being grabbed by a wave and being carried away. When consciousness returned, there was absolute amnesia, i.e., no recollection of what had happened. The other physicians were absolutely unable to convince me that I had gone through a shock. My disbelief was so strong that I insisted on going on with my work in the ward and thought the whole thing was a practical joke on their part. According to the description, I behaved like an intoxicated and slightly manic person. My body felt light, as if I were walking on air. The only thing that forced me after a while to go to bed was a weakness in my knees and an increasing nausea. As is often the case with intoxicated people, I saw the world in a rosy light and felt extremely affectionate toward everybody. During the day I developed a violent headache, and bit by bit the memory came back. It was a typical

retrograde amnesia, i.e., that which was experienced last also came back last. It took a whole day before I remembered the time immediately previous to the shock. The lameness of the musculature lasted a whole week and the ability to remember everyday happenings was reduced for a long time. (Forgetfulness and confusion are typical manifestations during shock treatment.)

In contradistinction to the patients, I did not experience any anxiety at the moment of losing consciousness, nor did I show any objective signs of anxiety. In this regard, it must be pointed out that the physical phenomena described here are experienced as anxiety by most people. It is different, however, if, first, one knows the rational explanation of these phenomena. Second, and more important, these phenomena also occur in the course of vegetotherapy, accompanied by a great deal of anxiety. Inasmuch as I had undergone vegetotherapy, the anxiety had been experienced at the time when these phenomena occurred; thus they were known to me. This intense anxiety occurs in all patients toward the conclusion of the vegetotherapeutic treatment, and in connection with similar physical phenomena. It is what Reich called pre-orgastic anxiety.

If I have described these phenomena in some detail, it was in order to point out the interesting fact that most of these phenomena—in a less acute manner—occur in the course of the vegetotherapeutic treatment. In shock therapy, the shift from an artificially increased sympatheticotonia to a relative vagotonic (parasympatheticotonic) relaxation is brought about abruptly, is being repeated with every new shock and ceases in between shocks; in the course of vegetotherapy, this change takes place gradually, almost imperceptibly. Our neurotic patients suffer from a chronic vegetative disequilibrium, essentially in the form of a predominance of sympatheticotonic reactions, but also in

the form of more or less localized sympatheticotonic and vagotonic reactions, that is, a disturbance of the harmonious interplay between the two antagonists. During shock therapy, one observes an acute and extreme change in respiration, particularly the occurrence of deep expiration; however, this does not last. In vegetotherapy, on the other hand, one makes a deliberate and sustained effort to establish the ability for deep expiration, that is, the ability to breathe with both chest and abdomen; the average person uses one or the other, or both, of these mechanisms, only incompletely. Thus, observations derived from shock therapy confirm the fundamental value of vegetotherapy.

To form an opinion as to the value of shock therapy for the treatment of mental disease is a different matter. Here, I will have to point out the differences between shock therapy and vegetotherapy. First of all, it goes without saying that shock therapy is used in a different kind of cases. Shock therapy is used mainly in psychotic or borderline cases. Vegetotherapy, on the other hand, is used mainly in neuroses, and cannot be used where the patient's conscious processes cannot be utilized in the procedure. Nevertheless, the comparison of the two methods will in part explain why, in my opinion, shock therapy alone cannot produce a cure (in our sense of full cure). The main point is that the shock treatment takes place independently of the patient's consciousness; that will say that all the conscious or unconscious pathological reactions which result in or from conflicts in the patient's life and environment are completely left out of consideration in shock therapy.

From a sex-economic point of view, energies are being set free which are discharged only partly. I have mentioned, for example, the sexual reactions occurring in the course of shock treatment. Quite plainly, these are the expressions of a

liberated sexual need, and it goes without saying that such a need cannot possibly be satisfied in any adequate way in a mental hospital. It cannot be satisfied for such reasons as that men and women are separated, that husband or wife are outside of the hospital, etc. But, in addition, sexual activities, such as masturbation, which would give partial gratification or rather a substitute gratification, meet with the customary concepts of the condemnable character of such activities. One only has to see the expression of horror on the faces of the nurses when they see patients' sexual manifestations in connection with the shock. When such things as baring the genitals or masturbation occur, they are immediately stopped by the nursing personnel. But even if one were not prejudiced, it would be difficult to give these things free rein. Even other forms of energy, such as anger, unrest and anxiety, have to be suppressed in the interest of hospital routine. For the same reason, one is almost forced to prevent discharges of aggressive energies or other actions which may influence the condition of other patients. Almost imperceptibly, the social living in the hospital makes one judge the patients' behavior moralistically; before being aware of it, one has said, "he is bad" or "she is nice" and thus gets away from a scientific comprehension of the patients' structure. It is wholly inconsistent to liberate affective energies with the treatment, and then immediately to suppress them again. The shock treatment requires much greater possibilities for individual therapy than a mental hospital can offer today.

The same holds for occupational therapy. When the patients, as it were, become alive and show interest in doing something, the opportunities one has to offer them are extremely limited. In the first place, it is mainly a matter of manual work, such as knitting, weaving, or outdoors activities; but this does not liberate

energies according to the patients' pleasure needs. One lacks the facilities for more varied forms of motion and for artistic work. In this field there are enormous possibilities, but they are limited first of all by lack of funds and personnel, but also by the point of view from which the work is considered. Namely, the point of view that if the patient works that is in itself a moral victory; the fact is overlooked that the work should be a source of pleasure.

Most therapists will realize that any improvement in a patient must be utilized by immediately moving him to an open ward and putting him to work. But, as I have already pointed out, circumstances do not allow to do this to a sufficient degree. On the whole, then, one must say that the energies that are liberated by the treatment and the needs that develop with the improvement are not satisfied; I repeat that this depends more on the routine and the economic circumstances of the hospital than on the individual director's concepts.

Many psychiatrists are also aware of the shortcoming which lies in the fact that psychotherapy is not combined with the shock treatment. They point out that psychotherapy is necessary before, during, and especially after the shock therapy. However, exactly *what kind* of psychotherapy should be instituted is not stated, and on the whole the problem is largely neglected.

From a vegetotherapeutic point of view, one might say that the shock treatment is a kind of mechanical gymnastics of the vegetative nervous system and the autonomic functions; thus it liberates vegetative energies. Where this liberation succeeds, there is considerable improvement. But since the treatment is purely mechanical, since it does not take in the whole personality, it will never really change the personality. This is clearly

demonstrated in the patients who were discharged as cured after shock therapy.

Mrs. N., 52 years old, had all her adult life been an apprehensive and pedantic person. Two years ago she became depressed, suicidal and completely apathetic. Hospitalized 1½ years ago, she showed no signs of improvement, was completely isolated, mute and deeply depressed. Shock therapy 3 months ago. After the seventh shock there was some animation; her husband noticed the difference. After 15 shocks there was a definite improvement: she began to talk, became more lively, somewhat more natural, and started to work. Began to develop insight into her illness. Was discharged as cured and remained well; her environment considers her well. At the time of discharge, she had retained a somewhat circumstantial, "school-mar'm" behaviour, very "refined," somewhat stiff in her motions, although considerably less so than before shock therapy. The pupillary changes from dilated to constricted were marked after every shock. There was also a lasting change in the pupils, in that after the treatment the pupils, under ordinary light conditions, were of a smaller diameter than before the treatment. A vegetotherapist would say that the patient became a socially adequate though neurotic personality, somewhat unnatural, formal and pedantic. The family, however, were so happy over her "cure" that they seemed quite willing to adjust themselves to this personality.

I could cite many such examples. Generally speaking, one can say that the patients turn from psychotic individuals into neurotic personalities with socially acceptable behavior. Where the environment can adjust itself to this personality, it may be assumed that the "cure" will last; where this is not the case, a relapse is to be expected. People in an advanced age will come up against fewer sexual conflicts and will therefore manage better.

As far as the mental hospital is concerned, it is quite obvious that hospital life cannot possibly be elastic enough to utilize fully the possibilities of expansion which the patient derives from the shock

treatment. The obstacles are both economic and administrative.

As vegetotherapist, one might think that the shock therapy would make many patients accessible to vegetotherapy who otherwise are unapproachable because of their rigidity. From a social point of view, one must say that, as things are now, shock therapy in the mental hospital gives certain definite results even though the improvement may be of short duration. It gives the patient and the relatives some hope and some possibility for better adjustment. From an economic as well as from the patient's subjective point of view, it is a great improvement even if nothing more is achieved than that the patient becomes capable of living outside an institution.

However, shock therapy will have no real significance until such time as its mechanism is understood and until we know what kind of aftertreatment is necessary. At any rate, it should give food for thought to the extreme constitutionalists in psychiatry. It seems unlikely that such a drug treatment would appreciably influence a purely endogenous condition.

One has to ask oneself how the vege-

tative deadness came about in the first place, and why it can be influenced or eliminated by vegetative means. One has to ask whether much could not be done prophylactically if children were brought up in a manner which would allow the biological functions to take a more natural course than is the case now. This would entail a complete reorientation with regard to human attitudes. Certainly, vegetotherapeutic experience points to the necessity, from a social preventive point of view, of a reorientation and a more natural form of living for the adolescent. The course of the shock therapy should open everybody's eyes to the fact that—inside and outside the hospital—the liberated vegetative energies should have possibilities for an outlet. If these were given, it is quite possible that many cases who are now negative would turn out positive. As they are not given now, shock therapy is in danger of meeting the same fate as many other new therapeutic methods which promise much but perform little and finally disappear. If this happens to shock therapy, it will be because one does not draw the consequences from the vegetative changes in the patient.

THE TREATMENT OF A DEPRESSION†

By CARL ARNOLD,* Ph.D.

The case reported here is the first case I treated consistently, from beginning to end, with Wilhelm Reich's character-analytic vegetotherapy.¹

A few years ago a young man came to see me and asked me whether it might be possible to help him. He was not interested in anything, did not care for his work, his family or the rest of his environment; he had no political, social or religious interests; there just was no fun in anything. He could not put his finger on anything definite that was wrong with him except one thing: he had no real sexual interest, never fell in love, never felt any sexual urge in the presence of women. On the other hand, he had phantasies and impulses with regard to men: often, when he would talk to a handsome man, particularly if he was a laborer with light, healthy skin, he felt the impulse to get close to him, to embrace him. These phantasies or impulses never went any further; he had never given in to them or even seriously thought of giving in to them. Because of these phantasies, he considered himself a homosexual; it was this that made him feel that his condition was pathological and required medical attention. He went to a neurologist who then referred him to me. Now he wanted to know whether the treatment would enable him to enjoy his work and to lead a normal family life.

His depression had already lasted several months. Before that, he had not felt

that anything was wrong with him and had been satisfied with the way things were going. He was the son of a minor small-town official, and was now 27 years old. He had only one brother, ten years his senior, who, as the patient said, had never played any considerable role in his life and now had been living abroad for many years. As far as the patient could remember, his childhood had been happy and rather uneventful. He was good in school and had gotten along well with his teachers. After graduating from the university, he had engaged in scientific work for some years, and after that had obtained, through an older colleague, a good position in an international firm which manufactured a mass article. His job was that of supervising the technical side of a part of the manufacturing process. His depression had become more intense just at the time when he had made a good start in his new job.

When he came to me, I had no time to take him on, and it was several months before I would have a free hour for him. In addition, I did not feel like taking him away from his work; he lived out of town, three to four hours by railroad. So I asked him whether he wanted to make an experiment: he would come to town every Saturday evening, have an hour then, one on Sunday morning and a third Sunday afternoon, so that he could go back Sunday night. He agreed to this. It was four to five months before I found time to take him on. In the meantime his father had died, an event which did not seem to make any particular impression on him.

Rarely have I had so much difficulty in

† Translated by the Editor.

* This is a pseudonym. Present conditions force us, unfortunately, to withhold the names of our European co-workers.

¹ Cf. Walter Frank, "Vegetotherapy." *This Journal*, March 1942, 63-87.

becoming clear as to my own impression of a person as with this man. He was a well-built young man of medium height, with a very polite demeanor. At first glance, he seemed to have an open face; if one looked more closely, however, it really did not tell anything. The eyes were open but cold; there was often an artificial smile which seemed to indicate compliance but also a certain facetiousness and a stubborn challenge, "Go ahead and see what you can do with me." His movements were somewhat slow and clumsy, but not rigid. He plainly disliked talking about himself; he waited until I asked him questions. These he answered in a dry, matter-of-fact tone, without any affect except a trace of hopelessness.

I started out by explaining to him that the goal of the treatment was that of making him clear about his own desires, of making him experience them in such a manner that he would get the confidence and the energy to realize them as far as possible. First of all, he had to get to know his own body and the impulses which he ordinarily did not let come through. In order to facilitate their coming through, I asked him to relax, to breathe deeply, especially to breathe out more deeply than he habitually did, and to give in to any impulses that he might feel coming through. Otherwise, I told him, he could do exactly as he pleased during the sessions: sit in a chair or anywhere else, lie on the couch, walk around in the room, etc., just as he pleased. If there was anything he wanted to say, he should talk; if he wanted to keep quiet, that was all right too. During the first hour, he sat in a chair most of the time.

I asked him to pay attention to what he felt in his body and his face. At first, he felt nothing, he said; it was as if he had not grasped the question. I pointed out that certainly he must feel the pressure of his body against the chair. That he did of course, he said; so I had him find the

various places where he did feel the pressure. I pointed out to him that he was sitting with a stiff back and tense shoulders. He realized this, and immediately switched into a new position and stiffened up in this new attitude. I pointed out the lack of expression in his face, but it took a long time before he developed any awareness of this. On the other hand, he realized almost immediately how expressionless his voice was.

For some time, this task of having him experience his body and his face and what he was doing at each moment was the main part of the work. It was clear that he usually thought out beforehand what he should feel and then found out that he really felt it, as, e.g., a pressure here and a tension there. From time to time it happened, to his great surprise, that he did not feel anything in a place where he had expected to feel a certain thing. Usually, after having recognized a pressure or a tension, he would change his position a little and then freeze in this new position as motionless as in the previous one. The more he began to feel his body, the more bothersome did it become to maintain these artificial positions. When I pointed out to him that he did not have to sit still, he began to move around in the room and to let himself go more when sitting or lying down. After some time, it was possible to show him that he merely took notice of certain sensations in his body and face and stopped there; that he hardly ever followed a sensation in its development and details. Most of the things which he recognized were things that he could figure out beforehand, that is, things which he thought I expected of him. When he began to show a little more motion, it soon became obvious that almost all his movements were entirely voluntary; if any involuntary movements occurred, as of a foot, a hand or a finger, they were soon either stopped entirely or became mechanical. When I pointed out this mechan-

icalness, he tried to cover it up. One movement which at first looked spontaneous was a rhythmical movement of one foot; it soon assumed an entirely mechanical rhythm and became quite uniform. When I pointed this out to the patient, the foot began to swing more freely; but soon I detected that the movement took place according to some complicated pattern, something like an eight-beat.

It became more and more evident that all his bodily sensations had a tone of unpleasure, and that for this reason he tried to feel as little as possible of his body and to think about it as little as possible. All his movements were of a voluntary character; that, he said, he did in order to make an end to a feeling of restlessness or unpleasure; on the whole, he could think of bodily pleasure only in terms of relief from restlessness and unpleasure. The same was true of masturbation which he had practised since puberty without much interest but in order to get rid of the restlessness in his body.

In the course of this work, he became increasingly dissatisfied with himself and his way of living. While working on his bodily sensations, he had always interspersed remarks about his daily life, both at the factory and the small-town boarding house. There was at first nothing in particular which he would criticize. After a while, as he became more and more troubled by his bodily sensations, he found more and more to criticize in his way of living, particularly with regard to his work. He felt that nobody paid any particular attention to him, neither his superiors nor his subordinates; it was always he who had to wait; his suggestions and questions were always considered in the second or last place; he felt that he never was able to put himself across. He hardly ever mentioned the sexual problem beyond stating, partly in response to my questions, that the "homosexual" thoughts kept cropping up as before.

After I had been working for some time on his bodily sensations and, in connection with this, on his authoritarian attitude which was evident in his manner of selection and recognition of his various bodily sensations, I let the patient lie on the couch and breathe as deeply as he could without forcing the breath. Before long, a wave-like rhythmic movement occurred in the body. However, for some time he himself did not take cognizance of it; not until I had him pull up his knees and move them in rhythm with the breathing. After he recognized the wave-like body movement, it was not long before he also realized that certain parts of his body did not take part in the movement; more than that, he realized that the movements were being inhibited in those parts. Although this movement, at first, had the same unpleasurable feeling tone as everything else he felt in his body, he soon became impatient, then annoyed and finally angry when he realized that he was unable to let the movement—or his breathing—go freely. One day when he complained that everything he experienced in his body was unpleasurable and that he could not conceive of any pleasure experience from his body, I pointed out that he was making certain small movements with his foot, movements which he himself did not notice. I asked him whether these movements were not pleasurable; they looked that way. When he paid attention to the sensations, his face lit up with amazement: "So it is possible to experience something positively pleasurable from one's body?" I asked him to see for himself, and for the whole hour he lay there with a lively interest and delighted expression on his face, discovering each moment new movements and new impressions from his body which it was a pleasure to experience; not a further word was said during the whole hour. It was obvious—both then and later—that he felt

this hour to be a turning point; and so it was, for me also.

During the period immediately following this, he was very well satisfied with the treatment and worked with great interest at the job of letting spontaneous vegetative movements come through and of finding out how he inhibited them. But this pleasurable state of affairs did not last long; it was soon replaced by an increasing dissatisfaction with his work; what bothered him most was that his work was being so little recognized, although he felt that he was doing *everything that could be expected of him*.

I concentrated on this expression of his and showed him that—from all he had told me about his life and work and from all he experienced during the sessions—this was and had always been a basic attitude of his: to do what people expected of him or what he thought they expected of him. For the first time he began to realize that there are other ways of approaching work, namely, out of one's own subjective and objective interest. These two "discoveries," that the body can provide pleasure and that one can work out of actual interest, he made in quick succession; they were the beginning of a thorough change in his attitude toward his sexual life as well as his work. I shall take up the latter point first, since it was this that we worked most on, although from this stage on, work on the sexual problem accompanied the work on the body and the work problem.

After the last-mentioned "discovery," the patient began to look at his work entirely differently, and at first it drove him to despair. He said that a great deal of his effort, more than half of it, was really wasted, had no objective significance, served no realistic purpose. But how could he, the junior, go and tell his superiors that the work he did was meaningless? There they sat, each with his job, each with his knowledge, each with his per-

sonal vanity. Would he not lose his job if he went and told them that they were all wet? And how would he, with his highly specialized work, find an equally good job? In addition, he began to doubt that the manufacturing process which he was supervising was as efficient as it should be. He shrank from entering upon the question, for he realized that if he found fault with the process, a conversion might turn out so costly that the management would refuse to consent to it; in that case he, who had criticized the present process, would hardly be in an enviable position.

Nevertheless, he came to grips with the problem. He undertook a microscopic examination of the product at various stages of manufacture, and found that a mistake was being made in one intermediate step of the process. This discovery necessitated a change in the whole process. He submitted his discovery to the management, and the change was made.

I had expected him to be delighted over his discovery and its result. But not in the least; he was hardly even aware of the fact that he had made a discovery which led to an important improvement in the manufacturing process. It did not increase his self-confidence and he was as unhappy as before at the thought of all the useless work he performed; he said it was not so bad as long as he did not know that he was wasting his time, but now it was simply intolerable. He complained about it to his brother abroad who tried to console him by pointing out that he should be glad to do a kind of work in which he could find 75% usefulness. To my patient, that seemed small consolation, apart from the fact that it was much more than 25% of his work that seemed useless to him. He was desperate because it seemed all too dangerous to criticize some of his superiors. I suggested he might find someone among his superiors who would cooperate with him. At first he saw no way of tackling the problem, but when,

after a while, the liberation of his bodily functions made him freer and more courageous, he saw new possibilities. When one day an executive from the main office came to the factory, he was able to put his concepts across to this man and to convince him of their practicability. With the help of this man, he got his whole work reorganized and got the company to establish a new laboratory with all the necessary technical assistance for which he had asked.

Just at this time, as he acquired a new attitude toward his work, he met a girl his age whom he had known as a small boy but had not seen in many years. He immediately asked her to go out dancing one Saturday night. This happened some time after he had discovered that it was possible to experience bodily pleasure. While dancing, he experienced—for the first time in his life, he said at first—a pleasurable sensation from the contact with a woman. But after having related this, it occurred to him that he had experienced similar sensations as a boy. A grown girl used to tickle and squeeze him, and for this she gave him 2 pennies every time she did it. On one such occasion, just as he was holding out his hand for the pennies, somebody noticed it and made fun of him. He felt terribly ashamed, and from that time on these things were over for good. I would like to mention the fact that during the whole treatment there were no infantile memories of significance for his later behavior other than this one.

He was very much in love with his old playmate and a short time later he proposed to her. She was not sure of her own feelings and wanted time to make up her mind. For some time they met as often as they could, usually every Sunday. As the work on his body made him freer, they became more and more intimate, without, however, entering a sexual relationship. She was definitely reserved herself, but according to what he said she

expected him to take a more active part. It was some time before he dared to do this, and then it was too late. She had fallen in love with another man and refused him. This came not quite unexpectedly for him, since for some time she had been more reserved than before; so, although the refusal hurt him, he did not take it too seriously.

The work on the body at this time consisted mainly in liberating vegetative movements in connection with respiration. With that there occurred several times, usually in connection with convulsive grimaces in the face, violent outbreaks of rage. These never lasted longer than a few moments. After every one of these outbreaks he was definitely freer and more courageous, both toward his girl friend and toward his chiefs. It was at this time that he managed to bring about the decisive change in his working conditions.

After a further release of muscular tensions, particularly in the legs, the lower back, the chest and the neck, the spontaneous rhythmical movements with respiration became more intense and of a more unitary character. As he realized that they came by themselves, he became afraid, but gradually learned to give in to them more and more. There were times when these movements were so intense that if once they had started he was unable to stop them voluntarily and had to let them run their course. One time, these reflex movements occurred while he was sitting in a chair, breathing deeply; in order to give his body a chance to move freely, he had to throw himself on the couch quickly. Another time—this was shortly before the break with his girl friend—the movements were accompanied by a strong erection, rhythmical clonic movements of the pelvis and ejaculation. The movements were accompanied by strong pleasure sensations. I should have mentioned the fact that shortly before the spontaneous movements became so in-

tense that the patient was unable to stop them voluntarily, he had experienced many times strong currents of warmth on the body surface, first in the legs, then in the abdomen and chest, and finally around and in the genital organs.

It was clear that we were dealing with the *orgasm reflex* discovered and described by Wilhelm Reich.¹ I had the definite feeling that there was something the matter with this reflex, although it took me some time before I found out what it was. On the psychic side, the patient did not as yet have the free, natural self-confidence that one expects to develop with a free orgasm reflex. In further studying his movements and his behavior, I was reminded of what had been so evident at the beginning of the treatment: his movements were without spontaneity, they were always mechanical. The same was the case now with the orgasm reflex; the body behaved more like a well-wound mechanism than like a naturally functioning organism. In an attempt to break up this mechanicalness I asked the patient to move his hand a little, as if he were using castanets; in doing so, he found that the movements of hands and arms gave him a definite pleasure sensation which was more intense than he had ever known it in these parts of the body. We then worked for some time on a similar loosening up of the legs and the chest, and after a while the orgasm reflex also became softer and freer and lost much of its mechanical character.

When the treatment had covered 153 sessions, over a period of 15 months, the summer vacation arrived. Since the break with his girl friend, he had gotten to know several girls but did not like any of them particularly. He then began to think of a young woman whom he used to see during the times when he was unable to fall in love. He wrote to her and they agreed

to spend part of the summer vacation together. In connection with his vacation he was supposed to do some travelling for his firm (the firm had given him funds for a research trip—another one of his suggestions which previous to his treatment had been flatly rejected).

He returned from his vacation in high spirits. He had come to the conclusion that he wanted to terminate the treatment; he felt that he had achieved what he wanted and that he could get along without my help. During his vacation, he had first made some study trips, and then he had met the young lady and had spent the rest of the time with her, first in the mountains, then at the seashore. He had immediately fallen in love with her and before long she returned his feelings. When they first met, she exclaimed in great surprise, "My goodness, what has happened to you? You have changed completely, you are all alive, and you never were that way before." Toward the end of the vacation, they had also been together sexually. Since they had no contraceptives, he had to practise withdrawal, something which he was hardly able to manage because his pelvis moved spontaneously. They were planning to get married.

I pointed out to him that his face was not as yet free, that there was still often something stiff and mechanical in his spontaneous movements, and that in the course of the treatment so very few infantile memories had come up. However, since he himself felt so well and confident, I could not advise him to continue the treatment. Thus he took leave, very grateful for the result of the treatment.

About two and a half months later, I had a letter from him; he was unhappy and wanted to see me. When he came, he related that the girl had said they could not go on with each other. As agreed upon, he had gone to her town and they had been together. Sexually, they had had

¹ Wilhelm Reich: "Orgasmusreflex, Muskelhaltung und Körperausdruck," 1937.

an opportunity now of being together without withdrawal or other limitations. But very soon it became clear to both of them that it was no longer as it had been during vacation. She found that he paid too little attention to conventions, and in addition she complained that he spoke too little and had no imagination. He, on the other hand, found that she was too demanding, that she always wanted him to spend money—although she could afford things as well as he—and that she always wanted to have things her way. In response to my question, he said he had well realized that in the sexual act she was not quite there, but he had tried to disregard this and not to think about it. After having talked some time about various disagreements that had come up between them, he said he had to admit that they really were not suited to each other, sexually or otherwise; he said he had realized this before, but had not dared to face the fact. Now he began to feel like looking for girls in his part of the country; he thought there must be girls there too, but up to now he had been unable to go out and look for them.

I had the patient lie down on the couch, and before a minute was gone there were spontaneous vegetative movements which after a while became unified in the orgasm reflex. The movements were softer and freer than they used to be, and the face participated; e.g., it gave expression much more freely to the pleasure sensation; but it was not entirely free. Apart from the face, the parts that were still somewhat rigid were the upper part of the chest and the region between the shoulderblades. But, on the whole, the movements showed clearly that the relaxation had further progressed since the conclusion of the treatment. This development corresponded to what he related about his work. He

utilized his more independent position for more independent work on an entirely objective basis; he no longer bothered about regulations and red tape any more than was objectively indicated. Thus, I had reason to hope for a good final outcome, though it is quite conceivable that whatever remained unsolved could provide a basis for a relapse.

Until more time has passed since the conclusion of the treatment, I cannot take up the various problems which the case presents. There is only one aspect which I wish to point out because this patient shows it much more clearly than any other case I have treated by the vegetotherapeutic method.

In most cases one finds that when a patient completely experiences an attitude, an expression or a tension, he also recalls spontaneously the situation which originally created them. In this manner, I have obtained in many cases a far greater wealth of forgotten infantile memories than in my earlier patients whom I treated by the psychoanalytic method. In the case described here, on the contrary, hardly any forgotten infantile memories came up—with the exception of the one described above—although we worked through very thoroughly his more or less infantile inhibitions in the form of their bodily expression. The problem raised by this observation is the following: Can a thorough correction of infantile attitudes conquer infantile anxiety and liberate the natural impulses, *without* the memory of those situations which created the inhibitions being recalled? In other words, is it sufficient to make the patient experience his inhibitions in their present-day anchoring, will this enable him to overcome them? This case cannot answer the question, but it points to a problem which we will have to keep in mind.

Editor's note: The author raises a very important question here. Anyone who for years has tortured himself and his patients with the method of free association is again

and again struck by the fundamental effect of handling the inhibitions in their present-day anchoring. If this is done, the corresponding memory frequently comes up spontaneously, almost like an afterthought. One cannot escape the impression that the memory itself is really not very important. This would seem to be in contradiction to the basic psychoanalytic principle that in order to remove the repression, the infantile memory has to be recovered. However, in an association-analysis, one may recover any number of pertinent recollections and yet, the symptom—or the inhibition of function—may remain, untouched. That is, we may then know, with reasonable certainty, that this or that inhibition has this or that historical causation. But this knowledge in itself does not remove the symptom, no more than the knowledge that one acquired an infection from a certain person on a certain occasion will cure the infection.

Arnold's case undoubtedly shows a great improvement. This does not lie in the elimination of one or several individual symptoms—which would mean little—but in a fundamental change in the patient's whole being and way of living. This in spite of having recovered only one significant infantile memory. However, the whole structure of the case makes it highly probable that this one memory was that of the decisive pathogenic trauma. The patient's outstanding characteristic and complaint was that of an inhibition of his pleasure function: there was no fun in anything, he had no self-confidence, in work as well as in love. The one important memory pertains just to this: his infantile sexual pleasure function was suddenly inhibited by something that made him deeply ashamed of it. In other words, compared with this one traumatic experience, all other infantile memories appear insignificant; and the treatment recovered just this one decisive memory. It is noteworthy that this memory was recovered at the time of the first reappearance of his pleasure function, when, as he said, for the first time in his life (actually, for the first time since the infantile trauma) he experienced pleasure from the contact with a woman. It was recovered not by way of association, but as a result of a change in vegetative functioning. This is why such a memory means so much more than when obtained in the course of "free association."

But there is another aspect to the problem. We can safely say that in this case a great many more memories were recovered, but *in the form of muscular and vegetative attitudes*. Because this is where the memories really are. It is their discovery in this form which really has a profound influence on the disease process. In an association-analysis, the memories are verbalized, and whether or not they have any affective content, whether or not the patient really re-lives them, is left to chance. In vegetotherapy, where the memories are discovered in muscular and vegetative attitudes, they are *experienced* and it seems of small importance whether or not they are also *verbalized*.

A NOTE ON "INTEGRATION" IN SCIENCE

By THEODORE P. WOLFE, M.D.

The ensuing remarks were prompted by the following statement:

A psychoanalytic study of biological phenomena is yet to come. It is quite certain, however, that it will not come from anyone who is primarily trained in psychoanalysis, but in all likelihood from the close cooperation of two individuals oriented biologically and psychoanalytically respectively who will complement each other and perhaps inhibit each other in getting too far away from established facts.—BEN KARPMAN, in a review of Ferenczi's "Thalassa: A Theory of Genitality." *Am. J. Psychiat.*, 1939.

A "psychoanalytic study of biological phenomena" is a strange postulate. It is inherently impossible of fulfillment. The fact is clear to most people that Ferenczi's "Thalassa" was not a psychoanalytic study but psychoanalytic speculation in biology ("psychologizing" biology), as was Freud's hypothesis of the death instinct.

If, however, "psychoanalytic study of biological phenomena" is merely a misnomer for Freud's postulate that "one day psychoanalysis would have to be put on a biological basis," then the above statement ("It is quite certain . . .") is indeed ironical. Because the biological foundation of psychoanalysis has been established by Wilhelm Reich, a man primarily trained in psychoanalysis. What enabled him to do it was the recognition and elaboration of the distinction between facts and speculation about facts—a distinction which is far from being as well known in science as most people believe; further, the realization that, while biological laws are valid in the psychic realm, the reverse is not true: psychic laws are not applicable in

the biological realm. A "psychoanalytic study of biological phenomena," however, could consist in nothing but just that: the application of psychic laws to the biological realm. The inevitable result would be the re-introduction of metaphysical factors.

The spectacle of the two individuals who "inhibit each other in getting too (*sic*) far away from established facts" is even more pathetic than it is amusing. Let's picture them: one is a psychoanalyst, the other a biologist. They speak an entirely different language; they don't understand each other. The psychoanalyst will try to inhibit the biologist in getting away from psychoanalytic facts (or theories), the biologist will try to inhibit the psychoanalyst in getting away from biological facts (or theories). They keep pulling in opposite directions. How can they "complement" each other? The psychoanalyst can only give a psychological interpretation to biological facts; that is his only tool; the result is metaphysics. The biologist sees no bridge from his findings to those of the psychoanalyst, because there is none. The only contribution he could possibly make would be that of understanding psychic manifestations as part of the total biological process; but that does not fit into biological thinking, mechanistic and teleological as it is. This is why Reich established the biological foundation of psychoanalysis not with the help of either the psychoanalyst or the biologist, but in spite of them. Both groups (with a few enlightened exceptions among the biologists) have been fighting him ever since.

Nevertheless, in spite of these basic in-

compatibilities, the two will try to integrate the findings of one field and the findings of another, entirely different field. These attempts at integration are old, we see them all around us: attempts to integrate psychoanalysis and biology, psychoanalysis and neurology, psychoanalysis and sociology, medicine and psychiatry, science and religion, etc., etc. Thus far, these attempts have failed, and, because they are based on a fundamental methodological error, they will never succeed. They are based on the assumption that the whole can be understood from a study of its parts. It cannot, because the whole is more than the sum of its parts. That is so much of a platitude that one is almost ashamed to repeat it. It is said by the very people who go on trying to "integrate." They know themselves that the reverse is true: the parts are the result of a differentiation of the whole; thus, they can be understood out of an understanding of the whole, but not vice versa. Everybody who has given the subject any thought knows this. That is not the problem. The problem is that

scientists, in spite of this knowledge, go on trying to "integrate." It sounds good: "Look at the enormous wealth of knowledge that we have accumulated; it's just a matter of integrating it; so let's get down to business, and soon we'll have an edifice of science of unbelievable grandeur and beauty." The trouble is, it remains a program, and all the talk about integration does not bring the prospect of such a magnificent edifice of science one step closer.

If, on the other hand, we study—as Reich did—the basic biological functions of the organism, their understanding leads inevitably to an understanding of all the various, seemingly unrelated, surface phenomena which a mechanistic science tries—in vain—to integrate. Then, we understand that a phenomenon like, say, castration anxiety (psychoanalysis) is the same as biological pleasure anxiety (sex-economy), a pelvic spasm (medicine), lack of independence (sociology), being withdrawn (characterology), sinfulness (religion), etc.

IN MEMORIAM

BRONISLAW MALINOWSKI

1884-1942

On May 16, 1942, Bronislaw Malinowski died of a heart attack at his home in New Haven. In him we lose a dear friend who not only maintained a personal relationship with us over many years but who also had an important part in the development of sex-economic theory. It was primarily his investigation of the predominantly matriarchal society of the Trobrianders which provided us with conclusive material regarding the sex-economic structure of primitive societies. This material gave us the ethnological proof of the *social* origin of sexual oppression and repression. It showed, furthermore, that sexual self-regulation, one of our clinical findings, actually exists in practical social terms. Malinowski's work, "The Sexual Life of Savages" (1929), continued Morgan's work on the clan structure of primitive societies. Not the family, as we know it today, formed the original social unit but the clan which derives from a common mother. It was Malinowski's great achievement to have been the first to discover the facts which make comprehensible to us the development of the patriarchal family from the matriarchal clan and thus the development of the patriarchate from the matriarchate.

Malinowski's functional methods of research also played an outstanding part in the comprehension of the origin of the family conflicts in the civilized human of today. Psychoanalysis defined the family conflict as a biological and therefore *unalterable* fact. Malinowski's ethnological findings proved unequivocally that the form of the family changes with social

development, that, in other words, it is dependent on the form of society at any given time and is not an unalterable biological fact. In providing these findings, Malinowski—without actively participating in the fight against the Fascist mysticism of family and race—has given us a powerful weapon in the scientific fight against the mysticism of race. For this, future generations, who will fully realize the significance of the family problem, will be deeply grateful to him.

Malinowski was the first, and I believe the only, ethnologist to apply *correctly* the findings of depth psychology. This is shown in his works "Crime and Custom in Savage Society" and "Sex and Repression in Savage Society." He was the first to use a functionalistic approach to problems of anthropology. Thus, he was a pioneer in the field of ethnology which prior to his work had been purely historico-mechanistic and moralistic.

The older ethnologists used to evaluate the sexual customs of the primitives moralistically instead of describing them objectively. Just as Morgan had investigated the natural clan society and as Engels had elaborated the connections between clan society and modern society, so Malinowski succeeded in giving us a true picture of the *natural* love life of the primitives, a love life which discloses unequivocally the laws of sexual self-regulation. It is due to him that we became able to rid ourselves of a distorted picture of the "savage," that we gained more confidence in the natural laws of life and became able to realize the high cultural

value of a natural sex life in the child. If a social order of the future is going to unite culture and nature again, Malinowski's elucidation of the *natural* morality and sociality of primitive societies will prove a cornerstone of a future cultural process. The positive, life-affirmative attitude toward infantile sexuality is going to be an essential prerequisite of this cultural evolution.

Malinowski's scientific achievements are too well known to be dwelled upon here. I may be allowed to mention some more personal facts which are known only to few. Being a scientific pioneer, Malinowski was a lonely man. All the formal recognition notwithstanding, he had to suffer a great deal from the usual human reactions to that which is new, really democratic and sex-affirmative. Only rarely did he show his inner self, a deep personality of the kind which makes one think of Beethoven's music. As a real democrat, he suffered deeply and silently from the irresponsibility of his fellow humans and the political rigmarole which plunged the European continent into the psychic pestilence. He was too much of an ethnologist and psychologist and too deeply anchored in functional thinking, to believe in the superficial means and the nostrums by which everyday politics pretends to master essential social problems. Thus, he was pessimistic with regard to a radical and early turn for the better.

On the other hand, he too, believed that one day it would be possible to put into general effect the laws of social self-regulation inherent in the human. In their discussions with him, our teacher groups

became well aware of this conflict in Malinowski. In long and serious talks he revealed that suffering which is the lot of every thinking person and every serious researcher when he sees himself confronted with the enormous chasm between petty everyday politics and sweeping biological and historical processes. He was, as we are, convinced that a way out of the chaos is possible only through a gigantic effort on the part of the biological and social sciences; on the other hand, his deep knowledge of the slowly grinding process of true science kept him from being unduly optimistic. His knowledge of the chasm between the basic problems of human life and the irrational strivings of the day kept him from taking an active part in public affairs. However, he proved in a practical way that he was ever ready to help with his full authority when Fascist mentality, in one form or another, threatened the search for truth or the advocacy of facts. He fully agreed with us in the evaluation of the basic elements of dictatorship of whatever kind; his ethnological research, like our clinical research, showed its root to be in the early authoritarian upbringing.

For sex-economy, which is *functional* sexual biology, Malinowski's work will always be a sociological fundament. There can be no doubt that in a radically changed society his historical discoveries will become living realities. To him, love, work and knowledge as the sources of human life were as meaningful as they are to us. We shall honor him by keeping his findings alive.

WILHELM REICH

SEX-ECONOMY AND EVERYDAY LIFE

I. CHARACTER ARMOR IN EVERYDAY LIFE

INAPPROPRIATE LAUGHTER

At the movies, one often observes the audience laughing at inappropriate moments. An example: A battle scene in a war film. All hell is loose, wounded soldiers cry out, others drop dead. A horse-drawn caisson races over a field. At a bump in the ground, the soldiers on it are almost thrown off the driver's seat. Half the audience breaks into laughter. They do not laugh about the bouncing caisson, for there is really nothing funny about it. In reality, they defend themselves against experiencing the dreadfulness of the battle picture. The bouncing caisson gives them a chance to evade the seriousness of the situation. The compulsive laughter is a defense against the seriousness; this is made possible by their being armored against unpleasure.

LASCIVIOUSNESS AT THE SIGHT OF SERIOUS SEXUAL SCENES

There is nothing more serious to human experience than the orgasmic fusion in the sexual act. Yet, when occasionally pictures of mating animals are shown on the screen, adolescents as well as adults react with lascivious laughter or dirty jokes. They know the longing for the biological fusion with the sexual partner, but they have never experienced it and had to struggle hard to armor themselves against it. This armoring reaction is expressed in the laughter at such scenes. It corresponds to the customary sexual joking of sexually unsatisfied people.

ARMORING AGAINST AWARENESS OF FASCISM

The *New York Times* of February 3, 1942 carried the following notice which strikingly demonstrates the armoring of the average mass individual against important political occurrences:

THEY WERE OVERLOOKED

No one gave a second thought to the two Philadelphia reporters who walked around town in the uniform of Nazi U-boat officers and addressing people in thick German accents. Naturally, it would have been otherwise if they had spoken in an exaggerated Harvard accent. To attract the attention of the waitress in a popular restaurant they invented some difficulty with the price list and said, "Was ist das?" The girl replied without looking at them, "Fifteen cents."

But if they had said to the girl, "We beg your pardon, Miss, but we have some difficulty in ascertaining the correct price for this baked apple with cream," she would have looked at them fast enough. After all, "Was ist das" does not sound very differently to a bus clerk at a lunch counter from "What is that?" If she heard the words at all she heard them in the conventional pronunciation, "Whaz-zat?"

In reality, the reaction of the waitress has nothing at all to do with the assumed similarity of the English and the German expression. Rather, it shows the far-reaching armoring of the average individual against the awareness of the Nazi uniform and what it represents.

2. MECHANISTIC MEDICINE AND NATIONAL HEALTH

The war mobilization in this country has brought to light a picture of our national health which is discussed by a keen observer as follows (*New York Times*, March 8, 1942):

Why does the health of the American people leave so much to be desired, from what one hears nowadays?

What about our New Army and the rejections for physical unfitness? General Hershey, head of the selective service, says: "Whether we are worse off physically than we were in 1917-18 is undoubtedly controversial. That our physical standards are higher now let us admit. The fact remains that while we may be no worse than we were twenty-four years ago, we seem certainly to be no better."

That is perhaps the most discouraging phase of the matter. Whatever may be the health of the American people and of its Army, we shall have to fight and win the war with what we have. But looking ahead to times of peace, we are driven to the tragic conclusion that social effort is a failure. Better food and better housing are of no avail. More play and fewer hours of work have brought no improvement in physical stamina. The labors of a whole new profession of social service, the work of Hull House and the Henry Street nurses have shown no results. Then what are we supposed to do to be saved? . . .

The question is, why have we no results

in the nation's health to show for what has already been done?

There can be no doubt that the improvement in the health of the people does in no way correspond to the gigantic efforts made. "Our present methods," states Dr. Cabot, "have failed to produce fit people." The question, then, as to *why we have no results in the nation's health to show for what has already been done*, is a highly pertinent one.

Our own medical experience makes the following conclusions inevitable:

1. Medicine, mechanistically and chemically oriented as it is, does not comprehend living functioning.

2. Thus, it does not comprehend the diseases of the vegetative system, the disturbances of biological pulsation.

3. The disturbances of sexual functioning are unknown to the average physician. They are left out in the curriculum of the medical schools, in spite of the fact that at least 60-80% of the total population suffer from them.

This state of affairs can be changed only by a transition from mechanistic to functional-biological thinking in medicine, and by a systematic comprehension of the biopathies (diseases resulting from sexual stasis). This will be possible only by collective investigations and by mental hygiene measures underwritten by society.

PHYSIOLOGICAL ANCHORING OF PSYCHIC CONFLICTS

I. PRESENT-DAY SITUATION AND INFANTILE HISTORICAL BACKGROUND

Ever since Freud, modern psychiatry has had to wrestle with a certain difficulty in everyday practice which is due precisely to the knowledge of the depth of neurotic disturbances and of their anchoring in infantile experiences. The more one knows about the unconscious complexity even of the simplest neurosis, the more helpless one feels when confronted with an everyday case which requires speedy diagnosis and therapeutic help; where real character-analysis, which requires a great deal of time and expense, is out of the question. This helplessness is basically different from that born of ignorance, as in the case of the general practitioner without any depth-psychological training. He tries to get along with such illusions as bromides or peptalks, thus saving the patient from the necessity of facing his conflicts. The helplessness of the trained physician is shown up occasionally in such tragicomic occurrences as the following which happened on a prison hospital ward:

There was a man on the ward who suffered from compulsive murderous impulses. It was all he could do not to jump at his neighbor's throat during the night and to choke him. Becoming more and more afraid of these impulses, he sought a consultation with the psychiatrist. He returned from the consultation all upset and reported: "What do you say to this! The psychiatrist told me I wanted to sleep with my mother and murder my father. And that I had a resistance against realizing that!"

Needless to say, the psychiatrist's procedure was wrong; but it is understandable out of his desire to utilize his psychoanalytic knowledge for bringing about a quick therapeutic effect. That such an

attempt can result in nothing but an intensification of the patient's defenses, goes without saying. Vegetotherapeutic training safeguards the physician against illusions and against such blunders; more than that, it supplies him with the means of achieving practical results in acute situations without having to delve into all the unconscious conflicts. This is possible because of the following facts:

The vegetotherapist knows that even the oldest infantile sexual conflicts *are still active in the form of muscular and vegetative disturbances*. Though he knows perfectly well that the neurosis in any individual case may be of several decades' standing and is deeply anchored in the psychophysical apparatus, he does not necessarily have to reach the deep conflicts. He looks for *the place of the physiological anchoring of the psychic conflict* and tries to alleviate the stasis of energy by establishing natural respiration and by releasing inhibited impulses. This is possible in a considerable number of cases, even in neuroses of long standing. The well-trained vegetotherapist knows, of course, that he does not "cure" a neurosis by releasing a few muscular blocks. However, he is able to bring about at least a temporary alleviation of the condition; an alleviation which is far more valuable than illusionary consolation or the explanation of unconscious contents while naively overlooking the deepseated resistances. This can be illustrated by the following case.

A woman of 35 came to see a vegetotherapist because of "nervous headaches," insomnia and severe anxiety. In particular, she suffered from the fear of "going crazy" and having to be put in a mental hospital. She had seen any number of physicians; they gave her bromides or told her "it was just overwork" or "it was

just a cold." She suffered from a severe orgasmic disturbance and a neurotic fear of the pessary, which in turn made her husband neurotic. She also complained of feelings of depersonalization. Her present illness had started suddenly 3 months before. It was immediately evident that the patient inhibited her respiratory function quite severely. Correspondingly, she suffered from "shortness of breath." The abdominal musculature was tense, the pelvis retracted, the musculature of neck and chin extremely rigid. True, the "nervous headaches" had unconscious psychic contents and an early infantile history; but they could be understood as the immediate result of the spasms in the musculature of the head and neck; it was in these spasms that the unconscious contents were anchored. It was clear that the patient was making an enormous effort to hold back "something." After about 10 minutes of correct breathing, the patient began to have coughing spells. She jumped up and refused to continue the work. She was persuaded to go on trying "to get her chest down." She did, but now she developed the *impulse to vomit*, and soon she ran to the bathroom and vomited violently. After this, she felt a great relief and spontaneously related the following: Shortly before she fell ill, a woman friend of hers had been taken to the hospital for violent vomiting. From then on, she herself had developed the fear of being taken to the hospital should she vomit (that is, a case of hysterical identification). In the course of a few days she developed actual impulses to vomit; these she fought by holding back. This was the origin of her "nervous headaches" which resulted from the muscular spasms connected with the holding back. True, the vegetotherapist knows that the hysterical identification with the friend has an infantile basis. He also knows that a sex-economically healthy organism could not develop any hysterical vomiting impulses; that, in other words,

it is the sexual stasis due to genital anxiety (frigidity) which causes the displacement of vegetative excitation from the genital to stomach and esophagus and thus gives rise to the vomiting impulses. But, in order to bring about an improvement in the acute situation he need not deal with these depth-mechanisms. In the *emergency*, it is sufficient to release the inhibited vomiting impulses by releasing the spasms of the musculature in chest, neck and head. The *cure* remains for a correctly carried out vegetotherapy.

2. AN INFANTILE FEAR AS EXPRESSED IN A SPECIFIC INHIBITION OF THE ORGASM REFLEX

In spite of numerous detailed clinical examples, many psychiatrists and psychoanalysts still find it difficult to understand how the vegetotherapeutic eliciting of expressive movements also can reproduce the respective infantile memories. The following example shows particularly clearly the anchoring of a repressed memory in a present-day form of expression.

This example is from the concluding phase of the vegetotherapeutic treatment of a character-neurotic. The patient had come for treatment because all pleasurable life situations were ruined for him by the interference of an involuntary "No" in the form of a depressed, tearful mood. This character trait finally had also affected his working capacity and had made him incapable of working. The development of his orgasm reflex had succeeded to a far-reaching degree. For some time, a final inhibition of the reflex failed to give way. Consistent work on the muscular actions which inhibited the reflex brought to light an attitude of the muscles of the neck which corresponded to a ducking of the head. As soon as the orgasm reflex set in, the patient would pull in his head. Gradually, this was replaced by a bending forward of the head.

Simultaneously, his face began to show an angry, observing and threatening expression which reminded one of an "angry old Jew." When this was shown to the patient, he thought of "Liebermann," the name of a German painter. The patient's father was a painter and had shown him pictures of Liebermann when the patient was still at a very early age. Liebermann was a Jew. Now, when the patient let the orgasm reflex come through, he was able to reproduce the expression of an angry old Jew even more distinctly. However, the pleasurable orgasm reflex and the angry facial expression were at variance with each other. When the patient looked at himself in the mirror, he recognized in his sagging cheeks the tearfulness which used to overcome him in pleasurable situations. Suddenly he exclaimed, "But I look like a raven."

Then he remembered that, before he was three years old, he used to have a nightmare of a big black raven sitting at a piano in his bedroom and playing. Then he remembered that his father had at one time painted a picture of a raven. This picture hung at a certain place in an upper story which could be reached only by means of a circular staircase. He always would have liked to go up there to look at the picture but was strictly forbidden to use that staircase. Then he remembered a strong fear he had at that time: the fear that his father might make the acquaintance of Liebermann and learn from him a well-kept secret of the patient. Then followed the recollection that a few years later he had visited an uncle and there had kept gazing at an ashtray. On this ashtray was a raven whose long beak formed the instrument for clipping the cigars. Now, "Liebermann" made him think of "Lieber Mann" and "Lieber Gott" (Dear man, dear God).

These memories, although they had

never come up before, appeared now quite spontaneously and without the patient having any inkling of their connection with the idea of castration.

Clearly, the threatening raven at the piano signifies his own fear of punishment for masturbation. The threat of this punishment expressed itself in his face at the time when the orgasm reflex developed. It appeared as an *actual inhibition* of the reflex, not as a mere historical recollection. All this broke through in a single session, and without the patient having even thought of masturbation anxiety. At the end of the session he said, "I'm dissatisfied; something important is lacking here." The inhibition of his pleasure function by a structurally anchored prohibition had become evident.

During the following session, the infantile fright situation was fully elucidated. Together with the ducking of the head, there appeared now an anxiety reflex in the pelvis and the legs, as if the genitals had to be protected from a threatening danger. The patient made rattling sounds and finally emitted the word "razor." The patient used to watch his father shave with a straight razor and used to follow the motions of the razor at the neck with amazement and fear. These impressions were functionally anchored in the attitude of ducking the head. The anxiety reflex in pelvis and legs was coupled with the attitude of ducking the head, corresponding to the coupling of the idea that the razor might cut the throat with the idea that it might as easily cut off the genital.

This case illustrates in a particularly clear manner the mechanisms of infantile castration anxiety as discovered by Freud; but it illustrates, in addition, the sex-economic concept of the somatic anchoring of repressed memories in present-day pathological bodily attitudes and reflexes.

A. S. NEILL'S "THE PROBLEM TEACHER"

Editor's note: When in Oslo in 1938, I met Neill. It was quite an experience. Two memories stand out vividly in my mind. One is that of the discussion evenings at Reich's, and Neill again and again pointing the stem of his old pipe at Reich and propounding some searching question. The oldest man in the group, he nevertheless was never ashamed to profess ignorance and never satisfied until he really got to the bottom of a thing. He seemed to take nothing for granted—except the right of the child to freedom.

The other is that of an evening when Neill gave a talk to a large teacher audience in Oslo. It seems that before he went to the platform he was approached by a lady who said in some trepidation: "You aren't going to talk about that man Reich, are you?" "I certainly am," said Neill. When he started to speak, he began to tug at his necktie, as embarrassed speakers are wont to do. But it was by no means the audience that embarrassed him; it was the necktie. "I'm going to talk about freedom," he said, "so the first thing I'll do is to free myself of this," and took the darn thing off. The audience was very dignified. Right in front of me sat a gentleman who must have belonged to the upper strata of the school hierarchy: stiff shirt, bow-tie, bowler hat, walking stick and gloves. There he sat, stiff as a board, dignity personified. And then, in the course of his speech, Neill said: "Dignity is only our way of keeping the children from seeing what silly asses we are." I have met few people with as little defensive dignity as this great Scots teacher and few with more simple human dignity than he.

In the following pages, we print a few excerpts from the first chapters of his book, "The Problem Teacher" (Herbert Jenkins Limited, London, 1939. 192 p.)

WHAT IS A TEACHER?

"What would you like to be when you grow up?" I have asked the question hundreds of times. Only once did a child reply: "A teacher." I had to send her away from my school later when she turned out to be mentally defective.

Among teachers there are roughly two kinds of ungrown-ups: the kind that loves being a child, and the kind that hates his inability to grow up. The former is what we call "the born teacher": the latter is the hateful disciplinarian. The born teacher is not a problem: he loves his work and he loves children, and children love him. But he should be pensioned off round about the early forties because, when he arrives at the stage when play is an effort to him, he is apt to become a pessimist with a mechanical smile.

The disciplinarian teacher should of course be pensioned off before he leaves the training college. He is dangerous and damned from the word go. Psychologically he is at the same stage as the bully of Class IV, but he is a bully who is in the position of being winner in every scrap. The born teacher is the Peter Pan of love: the disciplinarian the Peter Pan of power.

Now we can try a definition of the problem teacher. He is the man who hates the child in himself and the child in everyone else. The lover of children hates all those trappings of education that warp and thwart the child. The hater of children likes the hateful disciplines and punishments that rob the child of freedom and happiness.

The word Education means literally drawing out. A good teacher does not

draw out: he gives out, and what he gives out is love. And by love I mean approval, or if you like friendliness, good nature. The good teacher not only understands the child: he approves of the child. The ability to teach a subject is of minor importance: the one criterion applicable to any teacher is . . . Do children fear him? If they do he is a bad teacher, even though he has 100 percent of passes every year. If he is respected by his pupils he is a failure, for respect implies fear. I have said often and often that if a child cannot address his teacher as a silly ass the teacher is a danger.

Sometimes reviewers and other critics say that I continually write half-true things merely to shock people. This "silly ass" test is one of the alleged shocking half-truths. To me it involves one of the most important truths connected with education. To be called a silly ass by a child is the supreme test of sincerity to oneself and to the child. The man who reacts with a smile is a silly ass and knows it: the man who reacts with anger is a silly ass who dare not admit to himself that he is. No man is honest, but the man who protects himself by dignity is the most dishonest of all.

The beginning of my days as a good teacher dates from the time when the class did get beyond my control, and it was then that I learned that one must first lose if one is to win. When I lost my leather tawse for ever I lost my fear of my pupils and they lost their fear of me. Funnily enough in those leathering days I was said to be an excellent teacher, but then any sergeant in the Guards would be called an excellent instructor. . . . Our educational drill sergeants, supported by all the power of the State, convey to the unfortunate children the idea that the spit and polish absurdities are the importances of life.

Teaching as it is today must attract the spit and polish type of man, that is the man with childish values. Shaw puts it:

He who can does: he who cannot teaches.

Only the man with the lance-corporal mind can adapt himself to such a system: only he can tolerate a horizon bounded by the schoolroom walls and the Board of Education Code.

The question arises why the lance-corporal type of schoolmaster is so often a hater. . . . It is only about two months ago that I had a letter from a woman in Scotland saying that her boy of nine is strapped severely if he has more than two spelling mistakes in his dictation. His teacher is a young woman.

. . . I have invited the obvious retort . . . "Such teachers don't exist nowadays: you are forty years behind the times."

Good. I admit it. I admit that the man I have depicted is a monstrosity that only exists by accident. At the same time I contend that he exists in another form, that a teacher with the same psychology is a danger even if he has never touched a child in his life. I visited a rural school not long ago. The headmaster told me that he used the strap only once in a blue moon. "The old harsh discipline has gone," he said. He took me round the classes. In each room the children jumped to their feet when we entered. They hardly looked at me: their eyes were glued on the head. He spoke to a few of them and they answered in that insincere tone that has fear behind it. It made me think of the times when I was one of the guard inspected by the adjutant: I also knew what it was to watch an authority in fear. I was sure that the head would have approved of polished brass buttons. I came away from that school feeling miserable and angry. The little tin god had a school ruled by fear and he was quite unaware of the fact.

I contend therefore that one does not need to use physical violence to introduce fear into children's lives. I contend that there are thousands of teachers, male and female, who evade the realisation that their rule is primarily one of fear, that in

their hearts they give out hate and not love. In that school I made a funny remark. The children were afraid to laugh: they glanced at the head to see if they dared. As he apparently did not see the joke himself he did not smile, and they wisely kept their faces straight.

I ask you in the name of humanity why children should not be in a position to laugh all day if they want to. I ask you what hopes for a sincere life children have when they have to be insincere little devils for six hours a day.

THE TEACHER AND THE STATE

When the teacher in a Moscow school asked his class the simple problem: If a man buys an article for 50 rubles and sells it at a profit of 10 per cent, how much does he get for it? the bright boy of the class promptly answered: 'Three years' hard labour. It was the correct answer in Russia because in Russia the schools educate children for Communism. In Germany and Italy they educate children for Fascism. The State must see to it that education will be such that the *status quo* is perpetuated.

Theoretically one would think that schooling is an antidote to family influence. It isn't: it is family life on promotion. In school we have the proper substitutes . . . father, mother, brothers and sisters, discipline, obedience. The result on the teacher's psychology is appalling. He becomes a father with control over a home of forty or more children: his word is law: he can dispense with the love that every father must have for his children, and he can give the children only the hate side of father. And this is true of the disciplinarian, for he has no love to give out, only hate. No, the school does nothing to counteract the evils of home.

Should then the home be abolished? No. A home is a necessity to young children: they must have the love that only

the parents can give: they must have the sense of security that the presence of parents affords. A child needs a home up to the age of three or four. At that age he should be sent to a boarding school where he can have all the happiness he requires without the temptation to attach himself over-emotionally to his family.

Dealing with children is a specialised job, and many parents simply do not know how to do it. If the child has a temperature or a pain in his tummy they realise their incapacity and rush to the doctor. But if the child cries or steals or has bad tempers they never think of their ignorance of child psychology; they treat the child themselves. Recently I had to deal with a boy of seven who is an expert thief.

"Say, Willie," I said to him one day, "will you join my gang?"

"What gang?"

"Oh, I want you to steal things and if you join my gang I'll give you half what I steal and you'll give me half what you steal."

"O.K." he said, and next day presented me with sixpence.

The only hope of curing him is to be on his side all the time, and I can do it because I know how to do it and have the opportunity that living with the boy gives me. But a father cannot do this sort of thing. The emotional tie between father and son forbids any treatment even if the father knows how to give it.

A few days later I thought it was time for me to do my bit. I handed him a penny.

"What's this for?" he asked.

"Oh," I said easily, "I stole tuppence from a visitor and this is your half."

As I walked away he said to one of the staff: "Neill didn't pinch that tuppence. He is a liar."

This was good news to me, for it was necessary that he should discover that I was as big a liar as he was himself. Only

then were he and I equals. But if his father had used the same method on him the boy would have feared to face the fact that his father was a liar, and he would have evaded the thought, that is he would have added a new repression to the many that he has already.

The State's attitude to crime is that of the old Calvinists: the sinner must repent and, if he doesn't, we'll give him what for. And this attitude is the attitude of official education. If a child offends against the school laws he must be made to suffer. The new way of trying to find out what is behind the offence is discounted, not because it is difficult, but because it affords no opportunity of expressing hate. I see little difference between the attitude children are forced to have to their teachers in England and the attitude children and adults are forced to adopt to Hitler in Germany. Both are power politics. And both systems afford opportunity to the little man to use his power without conscience.

THE TEACHER AND HIS EGO

With an audience that is compelled to be there, the teacher has little to contend with in the gratification of his own ego. In my own school where children can walk out of the classroom and stay out for ten years if they like, the teacher has some opportunity to limit his ego expansion: indeed teaching under such conditions puts a man on his mettle: he knows that, if he is a dud, the number of walkings-out will prove it. This is as it should be, for children should be the best judges of teachers.

In the State schools the teacher has no clear measure of his own importance and his own talent, so that the acquiring of a little tin god psychology is comparatively easy. For he is always right. When I lectured at a Midland university and in answer to a question from a student, an-

swered: "I haven't the faintest idea," the students appeared to be excited. Later I asked them why, and got the reply: "We were knocked out by your confessing you couldn't answer a question, for if you ask a professor or a lecturer a question he always knows an answer. None would think of pleading ignorance."

Teachers are less inclined to learn from another than men of other professions, indeed one cannot teach an old dominie anything.

Here again we have the tremendous power of the ego. I shall illustrate by a personal example. Five years ago when lecturing in Oslo I met a man who interested me very much. He was a psychologist called Dr. Wilhelm Reich. He had rich ideas that carried him ahead of Freud, and I desired to know more about his teachings. In the end I decided to go to him as a pupil.

Now part of Reich's science lies in his discovery that psychical repressions show themselves in the muscles. They manifest themselves as stiffness, especially of the stomach, neck, etc. To learn the method one must, of course, go through it, and every holiday I have had for the past two years I have gone to Oslo (where I write this book) to go through the process. Reich found that I had a stiff neck, and each time he touched the back of my neck it was slightly painful. For days he concentrated on my neck and I became more and more annoyed. Finally I got furious. I sat up and looked him in the eye.

"Reich," I said, "I have just discovered something. I have discovered that I don't believe a bloody word you say. I don't believe in your muscle theory one bit. You are a sham."

I lay down on the sofa again, and Reich touched the back of my neck.

"Good Lord," I said, "the pain's gone."

"Yes," said Reich, "and so has the stiffness."

Reich holds that envy and spite show

themselves in cramping of the muscles of the neck.

The only feasible explanation is that all my resistance to learning from another man was concentrated in my neck muscles, for, not only did I learn more easily afterwards, but strangely enough, found that I could read Reich's books more easily. I had always complained to him that his German was too stiff for me.

I went on talking to Reich.

"I confess that I have had a lot of conscious resistance to coming to learn from you," I said. "I am fifty-five: you are forty. I am a well-known child psychologist, and it has been difficult and shameful for me to come to you to learn new things."

I had found something very vital, namely that I was allowing my petty ego to stand in the way of my progress. It was one of the most important discoveries of my life, and I cannot see how I could ever have arrived at it without Reich's undoubted genius for psychology.

It will be seen that when I write of tin gods I am on ground that I know well. . . . This brings up the question whether the teacher should be an example to his pupils. The old schoolmaster thought so much of this aspect that he would hide his pipe if a pupil came round the street corner. Among teachers as a class there is the idea of uplift, of being a shining example in behaviour.

This attitude to education is deplorable. Heaven only knows that the system today is evil enough in producing little hypocrites without having the insincerity of the teacher added to it. No man is good enough to be a model to anyone, young or old. No man should have to live an insincere life. Children cannot learn humanity from an inhuman teacher. They can only learn in complete sincerity. I dwell upon this matter of sincerity. It is the criterion of life. I have said again and again that children come to me from disciplined schools, insincere little humbugs,

with false manners which they drop in a few weeks. Discipline and fear have made them act a part that is foreign to child nature, for a child is by nature a sincere little blighter. To me goodness and sincerity are synonymous, and in curing a young thief the fundamental method is to be so sincere with him that his own sincerity comes out. Sincerity is akin to love. In the process one has often to act insincerely, as in my example of lying to Willie about my stealing tuppence from a visitor. My insincerity had a purpose . . . to break down his resistance to sincerity by showing him that authority with its dignity is a myth. If he had not discovered that I was a liar I should have gone on swindling him till he did. With a normal child one never needs to do this, one never needs to lie, and if one does lie one does much harm. The teacher must never allow the child to lose confidence in his, the teacher's sincerity.

I can write freely about the problem teacher because the problem teacher is in myself. But the child is also in myself and my sympathies are mostly with the child. I know how the teacher is handicapped by the circumstances under which he works, by his social status, by his inadequate training, by his lack of freedom. I write about him mainly to help him to become aware, not only of his surroundings, but more vitally of his inner ego and its dangers. I write not as an authority who is better than the other fellow, or as one critic once said of me, as the only man in the regiment who is in step. Having had a free school for eighteen years I have been in a position to see things that the average class teacher has no means of seeing. For one thing I have seen children as they are when free from outside adult discipline, and what I have learned from them seems to be so important that I shall not be happy until every child and every teacher in the land has freedom to be sincere and happy. But unfortunately I cannot live for a thousand years.

REVIEWS

PSYCHOANALYSIS AND ORGASTIC POTENCY

SCHILDER, PAUL: Types of Anxiety Neuroses. *Internat. J. Psychoanal.*, 1941.

The article begins with the sentence, "It was a great step forward when Freud (1926) stated that anxiety is a reaction to danger." Sex-economic clinical experience and the development of sex-economic theory show clearly that, in fact, this was the greatest single step *backward* ever made in psychoanalysis. Designating anxiety a "danger signal of the ego," that is, making a metapsychological concept out of what is a basic biological reaction of the organism, meant sounding the death knell of psychoanalysis as a clinical science and putting it firmly and definitely into the realm of metapsychology.

Schilder attempts a classification of anxiety neuroses according to their *psychological* structure, especially according to the quality and structure of their aggressiveness. This alone would show clearly that he is not speaking of anxiety neuroses at all, but of *psychoneuroses*, predominantly of a pregenital nature. He speaks of "regression," "deep-going analysis of cases of anxiety neurosis," the type and analysis of transference, etc. Now, we know that pure anxiety neuroses are rare, and that every anxiety neurosis, if allowed to continue, will develop into a psychoneurosis. But then we are no longer justified in speaking of anxiety neurosis.

In a footnote to a case history, Schilder takes issue with Reich's concept of orgasmic potency.

The patient was also orgasmically potent in Reich's sense of the term. I have seen full orgasmic potency comparatively often in severe neurosis. The correlation between the quality of orgasm and the severity of a neurosis, if it exists at all, is not a close one. Reich's statements in this respect are too schematic. Neurosis is not a disturbance of orgasm but a disturbance in human relations and in psychosexuality.

Now, Schilder is not alone in stating, "I have seen full orgasmic potency comparatively often in severe neurosis." This statement has

been made again and again for the past fifteen years by psychoanalysts in the attempt to refute the orgasm theory. It simply means that these analysts do not know what orgasmic potency is. They still consider a man "potent" when he is capable of carrying out the sexual act, that is, if he is erectively and ejaculatively potent. Erective and ejaculative potency, however, are very frequently found with complete orgasmic impotence. That is, the act may not give any pleasure or even result in a reaction of disgust. Excessive erective potency, as frequently seen in compulsive sadistic characters, always covers up a severe disturbance of orgasmic potency.

Schilder's clinical description contradicts his statement. The patient to whom Schilder refers as "orgasmically potent in Reich's sense of the term" showed, among other things, the following characteristics: "He was not inclined to give any deep interest to any other woman [than his mother] and his sexual experiences consisted chiefly in having intercourse with girls he picked up with friends in the street. . . . The analysis of the symptom [fear that he might not be capable of eating] again showed the displacement from the genitals to the mouth and the fight to protect his openings against something that was being forced into them. His general mode of living was still unsatisfactory. Although he was fully potent, he had no human relation at all with the girls with whom he had intercourse. He still wanted to reserve his libido for his mother. . . . His life in general was very dull."

Now, this is the description of a man who is orgasmically *impotent* in Reich's sense of the term. Presumably, "fully potent" in this case means "erectively potent." An orgasmically potent man does not have intercourse with girls he picks up in the street, is not incapable of a human relation with his sexual partner, has no displacement from genitals to mouth, and does not have a generally unsatisfactory and very dull life.

This throws some light on Schilder's statement that "neurosis is not a disturbance of orgasm but a disturbance in human relations and in psychosexuality." Of course, a disturbance in human relations and in psychosexu-

ality are essential symptoms of the neurosis, but these disturbances are the result of and are impossible without a biosexual disturbance, namely, orgasmic impotence.

T. P. WOLFE

GENERAL SEMANTICS: THE MYSTICISM OF WORDS

ALFRED KORZYBSKI: General Semantics, psychiatry, psychotherapy and prevention. *Am. J. Psychiat.*, Sept. 1941.

This is just about the most absurd thing to find its way into scientific journals in a great many years. In the opening paragraph, the author makes the bold statement that "General semantics is a strictly empirical, natural science." The next few paragraphs soon make clear the fact that it is neither empirical nor is it natural science, but a system of erroneous assumptions and conclusions, presented in an elaborately neologistic language. The author wants us to believe that all our ills come from a wrong use of language, of terminology. According to him, the "power of terminology" creates a "serious problem" "because of the well-known difficulty of recanalizing our nervous systems," whatever that is. The author's view of the world is expressed in the following passages:

The human world in which we live is based on science (constructively or destructively) and therefore on non-euclidian, non-newtonian and non-aristotelian systems, yet our inherited orientations remain aristotelian, euclidian and newtonian, which are quite different. Under such conditions optimum human adjustment is, in principle, impossible. Psychiatric students can readily understand that the world is afflicted with what may be called aristotelian maladjustment, neurosis, or even psychosis. To remedy such conditions is difficult but necessary if we want to save our sanity.

Present day scientific researches and world developments show that the old aristotelian era is dying. The terrors and horrors we are witnessing in the East and the West are the death-bed agonies of that passing era.

And so it goes on and on, in the same pseudoscientific and neologistic lingo:

In general semantics we introduce two new unavoidable factors; namely, our neuro-semantic and neuro-linguistic *environment as en-*

vironment, which also requires a radical revision of what we know and should particularly interest psychiatrists and educators.

The introduction of the terms "unspeakable" or "silent" level eliminates another serious source of confusion. . . . By accepting this unified terminology; namely, "unspeakable," or "silent" level, we automatically eliminate endless, useless verbal bickerings.

In general semantics we introduce a *general theory of evaluation* having very little to do with the meaning of words by verbal definitions. . . . Thus, evaluation is more than an organism-as-a-whole term; it is a *non-elementalistic term* (6) because it implies inclusion of the environment. We need a special technique to handle such terms which I will explain presently.

The reader may think that these things are unintelligible because quoted more or less out of context; on reading the whole article, however, he will find them to make no more sense.

After 50 years of psychoanalysis and 20 years of sex-economy, we are offered this:

One of the reasons that psychiatrists have to deal so often with "sex" difficulties is the false knowledge their patients have about the functions of the gonads. To my knowledge this formulation is novel, and has escaped the attention of psychiatrists.

This formulation is indeed novel, and it is only to be hoped that it will continue to escape the attention of psychiatrists. Korzybski, on the other hand, believes that as a result of handling the "neuro-semantic and neuro-linguistic functioning of the nervous system," or people's concepts about their gonads, "many 'sex' troubles disappear." In the same paragraph he says:

It is no longer a mystery that a great many psychosomatic difficulties arise on semantogenic grounds, and there should be no difficulty in understanding that when semantogenic disturbances are eliminated, which is the problem of general semantics, beneficial psychosomatic consequences should follow.

So, the psychosomatic problem, already burdened with the erroneous concepts of "psychogenic" and "somatogenic," becomes further complicated by the introduction of "semantogenic" factors.

Under the heading of "Neuropsychic Mechanisms" we read:

Experience shows that the "cortex" and the "thalamus" are very often poorly integrated

functionally, and our main problem is to bring about a better integration if at all possible.

In contrast with animals, the human cortex matures at approximately 18, and many differentiations acquired in childhood through fear or pain, are mostly on the old brain level. This explains why many maladjustments, stuttering, neuroses and even psychoses, originate in childhood when the new brain is immature.

In other words, we have here a rebirth of "brain mythology," of concepts which have long been shown to be erroneous and have been thrown out by the more enlightened neurologists and psychiatrists. The function of such fabrications as that childhood maladjustments, neuroses and psychoses are due to "differentiations acquired on the old brain level," is of course that of camouflaging the fact that these diseases are due to the sexual repression suffered in childhood and adolescence.

Freud had the courage to point out these facts, willing, as a scientist, to face the wrath of the public. Then, a man like Korzybski has the effrontery to make the following statement:

Similarly Freud ascribed *one* undifferentiated "sex" to infants which revolted public opinion. If Freud had used the extensional devices he would not have gotten into such difficulties. He would not have used the word "sex" without indexes, dates and quotes, and he would have explained that an infant has a sensitive organ which could be labelled 'S₁⁰' at birth, 'S₂¹' at the age of one, 'S₃²' at the age of two, etc.

Yes, Freud could have done that, but if he had, there never would have been a clinical theory of sex, because "sex" would have become entirely meaningless. This statement of Korzybski's shows better than anything else the true function of the "extensional devices": to make everything into meaningless hieroglyphs. The sad part of it is that so many people fall for this trick and think that something is scientific because of the use of mathematical symbols.

If, as Korzybski seems to assume, neuroses and psychoses are due to a poor integration of cortex and thalamus (a pure fabrication), then therapy logically consists in "thalamo-cortical integration." This is done by "extensionalization."

To achieve the coveted thalamo-cortical integration through extensionalization, we utilize what I call the "extensional devices," always using a slight gesture of the hands to indicate absolute individuals in space-time, orders of abstractions, etc., involving thus the kinesthetic sense, which is well known to have an important bearing on our orientations.

The *extensional devices* are as follows: (1) Indexes, (2) Dates, (3) Etc., (4) Quotes, (5) Hyphens.

I call the first three "working devices," and the fourth and fifth "safety devices." The application may seem simple when explained, yet it is laborious and difficult to acquire as it leads to a profound neurological recanalization of a usually poorly integrated nervous system.

But what is "profound neurological recanalization"? Nothing but a Korzybski term without any basis in reality. But Korzybski has other therapeutic tricks in his bag:

The passive, *listening*, 'father-confessor' method is no doubt effective in some cases, but it is a very slow and expensive process. As general semantics is educational, and re-educational, we *lecture* on sanity and *methods* of sanity, with a rather high percentage of beneficial results, in a comparatively short time.

The whole system is so patently unscientific and devoid of any basis in fact that the reader will ask why on earth anybody should review it in a scientific journal. The answer is: the system of general semantics is important; not because of its rational or scientific content, which is *nil*, but because of its irrational sociological function. This function is that of evading facts by a flight into meaningless terms. This is a general characteristic of academic science, but in Korzybski's general semantics it has reached a pinnacle which will not be surpassed for a long time to come. Here lies the danger of general semantics, and this danger should not be underestimated. General semantics is a superb piece of escapology. The mass individual is constantly on the lookout for just that. There were times when religion served the purpose satisfactorily. With their increasing sophistication, people look for a less naive escape, and they find it in all kinds of pseudoscientific systems. The system of general semantics serves the purpose in a particularly beautiful manner: it is a complete escape from facts and at the same time so

abstruse that it almost sounds intelligent, certainly extremely "scientific." The unsophisticated individual is in little danger of falling under its spell. He will call it—as did a very intelligent but unsophisticated friend of mine—"double talk." But the academic mind will prove a fertile soil for it, and, unfortunately, those afflicted with the academic mind have a lot to say in this world. The flight from facts and feelings into words and concepts is a well-known defense mechanism. It is found particularly in compulsive characters who defend themselves against any emotional reaction by a process of intellectualizing and verbalizing. It is a mechanism with which the character-analyst has to fight constantly in a certain type of patient; it is the mechanism that made so many free-association analyses of compulsive characters fail, because it armored the patient most effectively against any emotional contact with himself and the therapist. Korzybski's proposal is fundamentally nothing but that of replacing one kind of intellectualizing by another: to replace an "aristotelian" system by a "non-aristotelian" system. But this he proposes to do on a national or even international scale; governments should officially employ experts in general semantics "to guide mankind toward sanity."

The reader may react to this by shrugging his shoulders and saying, "That's silly." But that is what people said about the rantings of Hitler before 1933. Let's see what Korzybski has to say about Hitler.

What interests us in general semantics most is the *new methods of destruction* of sanity and civilization, methods based on the 'war of nerves' and *verbal distortion* introduced by a sick Hitler and his associates, and aped by humanly ignorant Mussolinis, Stalins and Mikados, who are fascinated by the success of the pathological performances of *verbal distortion* imposed on the world.

Here is an old and basic misunderstanding of Hitlerism: that it was brought about by a sick Hitler. This formulation is the most vicious misinterpretation of Fascism. It has an enormous appeal because it blames one man for something which is the responsibility of all humanity. In reality, Hitler's success is based on the mass disease of the people which he knew how to handle for his pur-

poses. No amount of "verbal distortion" could ever mislead a *healthy* people. The fact that most of Hitler's theories were erroneous, that many of his utterances were patent nonsense, did not diminish their effectiveness in the least; they are effective not because of their content, but because of people's receptivity for them. Hitler did not invent the theory of race. It had been there long before Hitler in the form of the metaphysical theories of heredity. All Hitler did was to make a system of it, to capitalize on the generally prevailing fear of sexuality and fear of responsible freedom, and to proclaim himself the savior who was going to save the world and to produce a new, pure race.

Similarly, Korzybski did not invent the human tendency to escape from facts and feelings into words. It is there, all around us. All he did was to systematize a rather general human failing and to capitalize on it to make himself the savior of an "aristotelian" world who is going to create a new race of "non-aristotelians."

And the academic world opens its scientific journals to this system, it reviews Korzybski's publications with approval, sometimes with certain reservations and doubts, sometimes with paradoxical feelings of inferiority about not understanding them, sometimes with a certain amount of condemnation, but always *taking their contents seriously* and always *overlooking the irrational function of the whole thing*. That this is the case, that, for example, an article like the one referred to here can be published in the official organ of the American Psychiatric Association, without any editorial comment, is more than disquieting, it is alarming. It shows the general blindness of academic circles to mysticism, and with that, to Fascism. It shows that the average academic mind is so closely allied to the thinking here represented that the preposterousness of the system strikes hardly anybody as anything out of the way.

One reviewer of Korzybski's book, "Science and Sanity," recently published in its second edition, says that the title might better have been, "Monomania with a Scientific Camouflage." If it were nothing but that, no more need to be said. Everybody is entitled to his monomania as long as it is for his

private home consumption and is not a danger to society.

Suppose someone had the idea that his headaches and his constipation were due to the glass objects in his house. He would have a monomania about glass. He would replace all his windowpanes with transparent plastic, would remove the glass from his picture frames, would drink from cups instead of glasses, would use candles instead of electric light bulbs, etc., etc. A harmless enough monomania. But suppose he would call it a "Non-Socratic system" of "Universal Clipsics" (the name was suggested to me by the box of paper clips in front of me) and were able to convince—on the basis of a clipsic terminology—physicians, dentists, psychiatrists, teachers, lawyers and journalists that all our physical, mental and social ailments are clipsogenic, if he could organize American Congresses of "Universal Clipsics," an "Institute of Universal Clipsics" and an "International Non-Socratic Library," it would be a different matter.

Now, let us see whether General Semantics is a private monomania. We shall soon find that it is not. The author is Director of an "Institute of General Semantics"; he has organized "American Congresses on General Semantics," an "International Non-aristotelian Library" and has obtained considerable financial backing. The article reviewed here is an abridgment of a paper read at the annual meeting of the American Psychiatric Association in 1940! And it is published in the official organ of that Association! The bibliography appended to this paper alone contains, among other papers by Korzybski disciples, the following (*italics* are the reviewer's):

- "General Semantics and *dentistry*";
- "Evaluational disorders and *caries*";
- "General semantics: implications of linguistic revision for theoretical and clinical *neuro-psychiatry*";
- "Neuro-linguistic and neuro-semantic factors in *child-development*";
- "General semantics in *education, counseling and therapy*";
- "General semantics and *schizophrenic* reactions: neuro-linguistic and neuro-semantic mechanisms of *pathogenesis*

and their implications for *prevention and therapy*";

"A preliminary report on the *psychotherapeutic application* of general semantics"; and a book,

"The mask of sanity, an attempt to reinterpret the so-called psychopathic personality (*"semantic dementia"*).

TIME, August 11, 1941, reports the following:

Last week 200 sworn enemies of Aristotelian logic gathered at the University of Denver for the Second American Congress on General Semantics. All disciples of Count Alfred Korzybski (founder of general semantics), all men who had applied general semantics to their various callings, they included professors, students, lawyers, doctors, psychiatrists, dentists, newspapermen, a musician, a movie producer. They had remarkable achievements to report.

Mathematicians Hugh G. and Lilian R. Lieber, who delivered their paper ("Science—The Modern Totem Pole") in blank verse, illustrated it with a drawing of a totem pole (see cut) built of five geometric figures intended to prove that science "has within it a philosophy which can protect us from the errors of our own loose thinking."

Edwin Green, assistant to the editor of the Los Angeles *Daily News*, . . . said, "Through . . . Aristotelian journalistic practices, the domestic press is . . . training the nervous systems of the masses in animalistic reactions . . ."

Experiments were reported in which general semantics had cured practically every known human ailment:

Dr. Congdon said that of 394 cases of student maladjustment (infantilism, alcoholism, kleptomania, homosexuality, all sorts of neuroses) 75% had been improved by general semantics treatments; some had been cured in an hour.

Teachers said they had cured pupils of poor reading, incoherent writing, stage fright, stuttering.

Lawyers said general semantics had helped them understand laws better.

A securities salesman said it had helped him save his clients' money.

A U. S. Army doctor said it had helped reconcile soldiers to Army discipline.

Doctors said it had helped cure impotency, frigidity, nymphomania.

A dentist said it had helped make fillings stay put in patients' teeth (by giving them emotional stability).

Dr. Hildreth Caldwell, a Los Angeles obstetrician, said it had helped make honeymoons happier.

This means that incalculable numbers of pupils, students and patients are being subjected to this delusional system under the guise of therapy and education. Diseases which it takes the serious physician months or years to treat effectively are said to be cured in one hour. What criteria of health must people have who make such statements!

These few samples alone make it clear that general semantics can no longer be considered just a private monomania without social significance. They show that it has found its way into medicine, dentistry, psychiatry, psychotherapy and education, introducing into these disciplines a new delusional element and promoting mystification in science and therapy. This just at a time when the world is engaged in a bloody struggle against Fascist mysticism.

The tone of Korzybski's publications is of an arrogance which is unheard of in scientific publications and reflects his role of the savior who is "concerned with the sanity of

the race" and is going to "guide mankind toward sanity." It is thus not surprising that he should quote "Man the Unknown," the book of Alexis Carrel, that other great mystic in science who has now happily disappeared from the American scene and who said, "As far as I am concerned I intend to devote the rest of my life to the problem of developing man in his organic and spiritual entirety. For the quality of life is more important than life itself."

In conclusion, I should like to contrast these Führer-like statements with the modesty of the real scientist who speaks on the basis of factual knowledge: "By and large, we, as humans as well as physicians and teachers, are as helpless in the face of the biological aberrations of life as, say, the humans of the middle ages were in the face of infectious diseases. At the same time we feel in ourselves that the experiencing of the Fascist plague will mobilize those forces in the world which are needed to solve this problem of civilization" (W. Reich, "The Function of the Orgasm," p. 219).

T. P. WOLFE

CORRESPONDENCE—NOTES

LETTER FROM A MOTHER

Dear Editor:

The article "Sex-Economic Upbringing" by Dr. Paul Martin in Vol. I, No. 1 of the Journal held such interest for me that I wish it could reach more young mothers and the obstetricians in whose hands they may perhaps suffer as I have. I will relate my own experience which must be similar to thousands of others.

After the birth of my first child in the maternity ward of a hospital, I suffered from over-abundance of milk. The 4-hour feeding schedule for infants was rigidly enforced with an 8-hour night period between feedings. No exceptions could be made to this rule, even for a patient in a private room or with a special nurse; it was (and still is, I believe) considered "bad for mother and baby." Being healthy and with much milk I was put on "dry diet" for *one full week* and my breasts bound tightly with thick towels to reduce the milk secretion and caking of the breasts. For one week I suffered and the 8-hour night was an agony of wakefulness and pain. I was not allowed the relief of a breast pumping. The result was striations (broken tissues) in both breasts.

After leaving the hospital I was instructed by my obstetrician to hold to the 4-hour nursing schedule—that this was most necessary for the baby's training in regularity. The result was that my child cried so hard between feedings that she was too tired to nurse fully when feeding time came around (this *never* to last more than 15 to 20 minutes). I was told to slap the soles of her feet to waken her when she fell asleep at the breast. Then the same thing was repeated with extreme discomfort to me from over-filled breasts, and hunger on the child's part from inadequate milk taken during the 20-minute nursing period every 4 hours. It took 3 full months of strain, anxiety and pain for my child and myself to adjust to this rigidly imposed schedule.

Later I was advised to wean my child at 6 months—even though she was gaining normally. I was told it was better for her and for me and that she would not learn to eat as well the foods she required if still "at the breast." I did this and went through over 3 weeks of pain and dry diet before my milk supply stopped.

I have never before read anything in any books on the care and feeding of children, medical or otherwise—I have read many—that rang in my ears with what seems to me such common sense as Dr. Martin's article. I have three children, all half-grown now, and I would give much to have been spared the unnecessary suffering, the spoiling of much of what should be full natural enjoyment in the experience of motherhood. I am in full agreement with what Dr. Martin says about the care of the child and the interplay between child and parent with the eliminating of inhibitions which are actually *endorsed* by the doctors and pedagogues of repute and authority. We mothers do not want to hand on to our children those rigidities which we have had forced upon us in the name of "right training."

Have other articles by Dr. Paul Martin been translated? If so, where can they be found? I wish that such articles could reach a larger lay public. I am sure many would be helped by such a piece as "Sex-Economic 'Upbringing'" who might never come in contact with the Journal. I wish the *Reader's Digest* would publish an abstract of this excellent article.

Sincerely,
Mrs. _____

WARNING AGAINST THE APPLICATION OF SEX-ECONOMIC KNOWLEDGE

This Journal will open many a reader's eyes to those diseases which are inaccessible to a mechanistic pathology. He will, increasingly, encounter and begin to understand the various diseases which are of a biopathic nature. If he is a teacher, practising physician, psychiatrist or psychoanalyst of this or that school, he will be greatly tempted to apply the method of vegetotherapy. But no matter how simple and clear the connection between sexual stasis and biopathies may appear to him, no matter how great his urge to help, he will be unable to grasp and judge the dangers of a practical application of his sex-economic knowledge. These dangers are enormous.

First of all, for the patient who is treated by an untrained individual. Deep down, the patient is armored against any contact with the living. The breaking down of this armor requires far-reaching processes of emotional reorientation which, in order to be successful, have to take place in a definite way. The technique of bringing this about requires years of intensive training on the part of the therapist. If the therapist lacks this technique, the breaking down of the armor may result in dangerous psychic and somatic reactions which he will be unable to handle. It would be frivolous to hold out hopes to individuals whose biopathies have brought them suffering and have led them to resignation, if these hopes can no longer be realized, be it for reasons of age, an unalterable life-situation or chronic, irreversible illness.

Second, every mortal, whoever he may be, is in some way a carrier of the emotional plague. He has in himself—the reader of this Journal not excluded—the fear of involuntary vegetative life (physiological pleasure anxiety). In order to apply sex-economic knowledge without wreaking damage, one must first have mastered one's own armoring to a sufficient degree.

Mental hygiene, if done correctly, is a vast and dangerous field. There are innumerable bitter enemies who only wait for the chance of saying, "See, I told you so," and of running to the police. There is no more bitter hatred than the hatred of the moralistic individual disillusioned in life, no more violent anxiety than physiological pleasure anxiety. On this thrives the irrationalism which dominates our times. Thus the well-meaning reader will abstain from any therapeutic experiments and uninformed utterances, if only in order not to endanger the work of the sex-economic physicians and teachers. The officers of the International Institute are always ready to help in any problems that may come up in this respect. On the other hand, they decline any responsibility for actions of any kind on the part of individuals untrained in sex-economy and vegetotherapy.

THE INTERNATIONAL INSTITUTE FOR
SEX-ECONOMY AND ORGONE-RESEARCH